F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	1

CONTRACT NO. 60B98

1-18-08 Letting, Item 015

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAU ROUTE 1312 / EMERSON STREET
OVER NORTH SHORE CHANNEL
STATE SECTION: 0707-B
PROJECT: ACBRM-1312 (001)

BRIDGE REPLACEMENT
COOK COUNTY

C-91-065-07

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION:

1962 (17) MINOR ARTERIAL 2.49 (FD–20)

TRAFFIC DATA:

ADT EMERSON STREET: 12,920 (2005)

ADT EMERSON STREET: 20,000 (2030)

POSTED SPEED LIMIT: 35 MPH (EMERSON STREET EAST BOUND AND WEST BOUND)

DESIGN SPEED LIMIT: 35 MPH (EMERSON STREET EAST BOUND AND WEST BOUND)

D-91-065-07

LOCATION OF SECTION INDICATED THUS: -

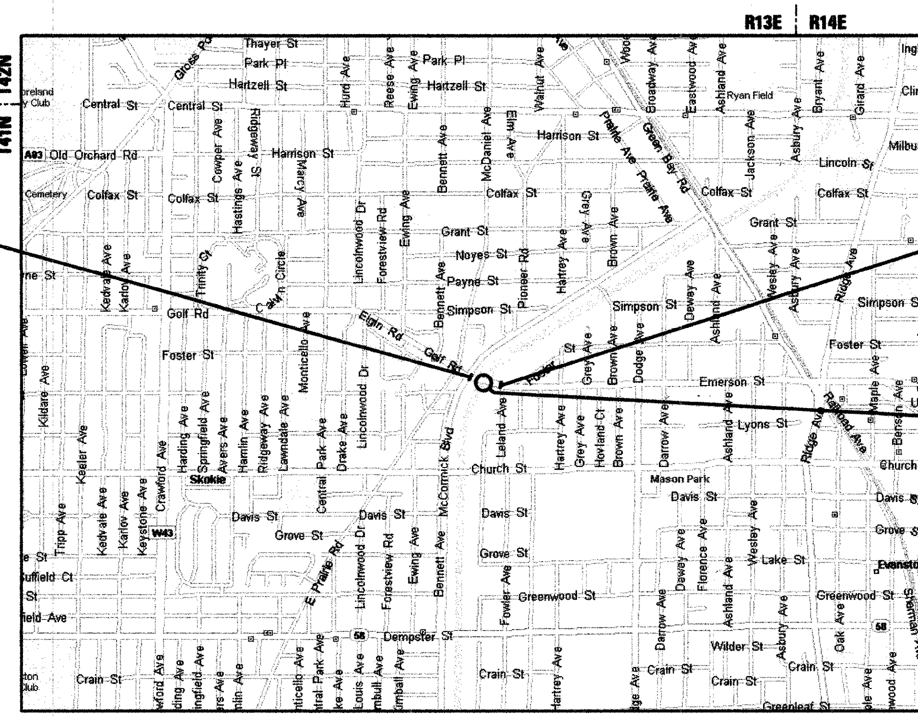
NEW TRIER TOWNSHIP T42N

EVANSTON TOWNSHIP T41N

R13E | R14E

EMERSON STREET PROJECT BEGINS STA. 100+32

EMERSON STREET PROJECT ENDS STA. 105+86.56



BRIDGE REPLACEMENT-EMERSON ST. OVER NORTH SHORE CHANNEL
L=210 FT
STRUCTURE NO. 016-0655 (EXISTING)
STRUCTURE NO. 016-2858 (PROPOSED)

LOCATION MAP

0 2500' 5000'
1" = 2000'

PROJECT LOCATED IN THE CITY OF EVANSTON AND THE VILLAGE OF SKOKIE

1" = 100'
1" = 10'
1" = 50'
1" = 40'
1" = 30'
1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 60B98

STATE OF ILLINOIS JOEL J. IHDE 5051 ITASCA LICENSED STRUCTURAL ENGINEER

SIGNATURE: [signature]
DATE: 10-04-07 EXP: 11-30-08
JOEL IHDE, P.E., S.E.
STRUCTURE PLANS
BOLLINGER, LACH & ASSOCIATES, INC.

SYED S. ALI 062-044196 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

SIGNATURE: [signature]
DATE: 10-4-07 EXP: 11-30-07
KAM ENGINEERING INC.
LIGHTING PLANS FROM 29 TO 34

GROSS LENGTH OF PROJECT = 555 FT = 0.105 MILES
NET LENGTH OF PROJECT = 555 FT = 0.105 MILES

CRAIG A. LUKOWICZ 062-041788 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

[signature] DATE 10/3/07
CRAIG A. LUKOWICZ
ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO. 062-041788
MY LICENSE EXPIRES ON 11-30-07.
BOLLINGER, LACH & ASSOCIATES, INC

CONSULTING ENGINEERS & LAND SURVEYORS
Bollinger,Lach & Associates,Inc.
333 PIERCE ROAD · SUITE 200 ITASCA, IL 60143 630 438 6400

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct 9 20 07
[signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER
December 7, 20 07
Eric E. Harm [signature]
Interim ENGINEER OF DESIGN AND ENVIRONMENT
December 7, 20 07
Christine M. Reed [signature]
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

IDOT CONSULTANT PROJECT MANAGER: MR. BRIAN KUTTAB 847-705-4431 (DISTRICT 1)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

INDEX OF SHEETS

STATE STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420401-06	BRIDGE APPROACH PAVEMENT
424001-05	CURB RAMPS FOR SIDEWALKS
515001-02	NAME PLATE FOR BRIDGES
542101-01	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERTS 75 mm (15") THRU 900 mm (36") DIA. AT RIGHT ANGLES WITH ROADWAY.
542106-01	REINFORCED CONCRETE END SECTIONS FOR PIPE CULVERT 1050 mm (42") THRU 1500 mm (60") DIA. AT RIGHT ANGLES WITH ROADWAY.
542601	REINFORCED CONCRETE PIPE ELBOW
601101	CONCRETE HEADWALL FOR PIPE DRAIN
602001	CATCH BASIN TYPE A
602301-01	INLET TYPE A
602601-01	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604086-01	FRAME AND GRATE TYPE 23
606001-03	CONCRETE CURB AND GUTTER TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
664001-01	CHAIN LINK FENCE
701701-05	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-03	LANE CLOSURE, MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901	TRAFFIC CONTROL DEVICES

MWRD GENERAL NOTES

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
2. ELEVATION OF DATUM IS NGVD 29.
3. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED (SEWER AREAS), REQUIRES STONE BEDDING WITH STONE 1/4" TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
4. "BAND SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR MATERIALS.
5. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAT AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
   (A) CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SHEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE.
   (B) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
   (C) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
6. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18 INCHES VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18 INCHES VERTICAL SEPARATION. IF EITHER THE VERTICAL AND HORIZONTAL DISTANCES DESCRIBED ABOVE CAN NOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED TO WATERMAIN STANDARDS.
7. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALLL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
8. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
9. THE CONTRACTOR SHALL PROTECT AND UTILIZE EXTREME CARE WORKING WITHIN THE VICINITY OF THE MWRD FACILITIES.
10. THE CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS AS DIRECTED BY THE ENGINEER TO ALL MWRD FACILITIES, 24 HOURS A DAY.
11. THE CONTRACTOR SHALL SUBMIT THE PLAN AND METHODOLOGY FOR DRIVING SHEET PILES AROUND MWRD STRUCTURES TO THE MWRD AND THE ENGINEER FOR REVIEW TO AVOID DAMAGE TO DISTRICT FACILITIES AND APPROVAL THREE (3) WEEKS PRIOR TO THE START OF WORK AND THE MWRD STRUCTRES SHALL BE PROTECTED AS PER THE DETAILS OF SHORING AND BRACING SYSTEM PLANS SIGNED AND SEALED BY AN ILLINOIS REGISTERED STRUCTURAL ENGINEEER.
12. THE CONTRACTOR SHALL COMPLY WITH THE GENERAL CONDITION OF THE MWRD PERMIT. THE COST FOR COMPLYING WITH THESE MWRD REQUIREMENTS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEMS.
13. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL THE MWRD FACILITIES AT ALL THE TIME DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL FOLLOW AND ABIDE BY ALL THE GENERAL CONDITIONS AND REQUIREMENTS OF THE MWRD PERMIT. THE PERMIT WILL BE AVAILABLE AT THE ILLINOIS DEPARTMENT OF TRANSPORTATION, DISTRICT ONE OFFICES FOR INSPECTION BY THE CONTRACTOR PRIOR TO THE PROJECT LETTING OR MAY BE INCLUDED IN THE CONTRACT DOCUMENTS. A COPY OF THE APPROVED PERMIT WILL BE AVAILABLE WITH THE ENGINEER AT ALL TIMES FOR COMPLIANCE.
15. THE CONTRACTOR SHALL PROVIDE ADVANCE NOTICE, UNDER THIS PERMIT AT LEAST TWO DAYS IN ADVANCE PRIOR TO THE START OF CONSTRUCTION AND SHALL SPECIFY THE PERMIT NUMBER, MUNICIPALITY AND LOCATION.

[ ] DENOTES COST INCLUDED IN THE CONTRACT LINE ITEM.

GENERAL NOTES

1. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E" AT 800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION IS REQUIRED).
2. 10 FT. TRANSITIONS SHALL BE USED TO MATCH PROPOSED CURB & GUTTER AND MEDIAN ITEMS OF WORK TO EXISTING CURBS & GUTTERS AND MEDIAN IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEMS OF WORK SPECIFIED.
3. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, THE CITY OF EVANSTON, THE VILLAGE OF SKOKIE, AND MWRD.
4. THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
5. THE RESIDENT ENGINEER SHALL CONTACT AREA TRAFFIC FIELD ENGINEER TECHNICIAN MR. WALLY CZARNY AT 773-685-8386, A MINIMUM OF 2 WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS OR SIGNING.
6. THE CONTRACTOR SHALL TAKE EXTRA CARE IN GRADING AND EXCAVATING NEAR TREES WHICH ARE NOT MARKED FOR REMOVAL SO AS NOT TO CAUSE INJURY TO THE ROOT SYSTEM OR TRUNKS. HAND EXCAVATION SHALL BE PERFORMED IF MAJOR ROOTS ARE PRESENT. MAJOR ROOTS OF A TREE THAT ARE TO REMAIN IN PLACE EXTENDING INTO THE EXCAVATION AREAS AT AN ELEVATION THAT WOULD INTERFERE WITH ANY PORTION OF THE PLANNED CONSTRUCTION SHALL BE SEVERED AT A POINT IMMEDIATELY OUTSIDE OF THE EXCAVATION AREA IN A MANNER THAT WILL CAUSE THE LEAST AMOUNT OF SYSTEMIC DAMAGE TO THE REMAINING TREE STRUCTURE. THE EXPENSE OF ANY REQUIRED HAND EXCAVATION AND/OR THE CUTTING OF MAJOR TREE ROOTS, AS DESCRIBED ABOVE, SHALL BE CONSIDERED INCLUDED IN THE CONTRACT LINE ITEM BEING REMOVED OR INSTALLED AT THAT LOCATION.
7. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE NORTH SHORE CHANNEL SAFELY OPEN AT ALL TIMES FOR NAVIGATION. THE COST FOR THIS REQUIREMENT AND ANY NECESSARY SAFETY/CHANNELIZATION DEVICES SHALL BE INCLUDED IN THE COST OF "REMOVAL OF EXISTING STRUCTURES".
8. IN ACCORDANCE WITH ARTICLE 107.01 OF THE STANDARD SPECIFICATIONS, THE CONTRACTOR SHALL ABIDE AND COMPLY WITH ALL LOCAL ORDINANCES AND REQUIREMENTS AND SHALL COOPERATE WITH THE LOCAL AGENCY(IES), MUNICIPALITIES INVOLVED AS DIRECTED AND APPROVED BY THE ENGINEER. THE COST FOR COMPLYING WITH THESE REQUIREMENTS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEMS.
9. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY MR. PAUL D'AGOSTINO AT (847) 844-2512 OF THE CITY OF EVANSTON FOR THE SPECIFICS OF THE TREE PRUNING AND THE TREE PROTECTION.
10. THE CONTRACTOR SHALL CONTACT MR. LARRY SHANK AT (847) 291-3214 OF COMED FOR THE DISCONNECTION/CONNECTION OF THE LIGHT POLES.
11. THE CONTRACTOR SHALL REMOVE AND RELOCATE THE EXISTING SIGNS, INCLUDING THE MWRD SIGNS IN ACCORDANCE WITH ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THE COST FOR THIS TASK SHALL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEMS.

COMMITMENTS

1. IDOT (BUREAU OF CONSTRUCTION) WILL PROVIDE A COPY OF AS-BUILT PLANS OF THE COMPLETED STRUCTURE TO THE UNITED STATES COAST GUARD.
2. RESTORATION OF ADJACENT PARK AREAS SHALL INCLUDE TURF AS WELL AS OTHER VEGETATION, SUCH AS TREES AND SHRUBBERY.
3. THE CITY OF EVANSTON SUGGESTED AN ON-SITE MEETING AS THE PROJECT GETS CLOSER TO CONSTRUCTION, SO THAT THE CITY CAN REVIEW THE CONDITIONS WITH IDOT AND THE CONTRACTOR.
4. NORTHWESTERN UNIVERSITY AND THE NEW TRIER HIGH SCHOOL ROWING TEAM SHALL BE CONTACTED REGARDING PROJECT STATUS AND CONSTRUCTION SCHEDULES. EFFORTS SHALL BE MADE TO KEEP THE CHANNEL OPEN FOR THE SAFE PASSAGE OF RECREATIONAL CRAFTS. THE NAMES, E-MAIL ADDRESSES AND PHONE NUMBERS OF THE CONTACT PEOPLE ARE AS FOLLOWS:

ANDREW McGONIGLE
NORTHWESTERN UNIVERSITY
A-McGonigle@northwestern.edu
847-815-4738

ROSE MARCHUK
NEW TRIER HIGH SCHOOL ROWING TEAM
PROGRAM DIRECTOR AND VARSITY GIRLS COACH
roserows@ameritech.net
847-828-7673

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
INDEX OF SHEETS, GENERAL NOTES, STATE STANDARDS AND COMMITMENTS

SCALE: NONE — DRAWN BY JSS
DATE: NOV. 13, 2007 — CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

PROJECT: FAU RTE. 1312, EMERSON STREET OVER NORTH SHORE CHANNEL, COOK COUNTY

	SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE						
		UNIT	TOTAL QTY.	80% FED 20% STATE			100% CITY OF EVANSTON			
	CODE NO. ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
	20100110 TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	187	187						
	20100210 TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	52	52						
	20101000 TEMPORARY FENCE	FOOT	330	330						
	20101100 TREE TRUNK PROTECTION	EACH	41	41						
	20101300 TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	20	20						
	20200100 EARTH EXCAVATION	CU YD	1725	1725						
	20700400 POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	384		384					
	20800150 TRENCH BACKFILL	CU YD	10	10						
*	21101615 TOPSOIL FURNISH AND PLACE, 4"	SQ YD	4385	4385						
*	21101815 COMPOST FURNISH AND PLACE, 4"	SQ YD	992	992						
*	25000300 SEEDING, CLASS 3	ACRE	0.2	0.2						
*	25000400 NITROGEN FERTILIZER NUTRIENT	POUND	72	72						
*	25000500 PHOSPHORUS FERTILIZER NUTRIENT	POUND	72	72						
*	25000600 POTASSIUM FERTILIZER NUTRIENT	POUND	72	72						
*	25100630 EROSION CONTROL BLANKET	SQ YD	992	992						
*	25200100 SODDING, SALT TOLERANT	SQ YD	4385	4385						
*	25200200 SUPPLEMENTAL WATERING	UNIT	44	44						
*	28000250 TEMPORARY EROSION CONTROL SEEDING	POUND	40	40						
	28000510 INLET FILTERS	EACH	5	5						
	28100107 STONE RIPRAP, CLASS A4	SQ YD	2175		2175					
	28200200 FILTER FABRIC	SQ YD	2175		2175					
	40600200 BITUMINOUS MATERIAL (PRIME COAT)	TON	1	1						
	40600300 AGGREGATE (PRIME COAT)	TON	4	4						

	SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE						
		UNIT	TOTAL QTY.	80% FED 20% STATE			100% CITY OF EVANSTON			
	CODE NO. ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
	40600982 HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	SQ YD	480	480						
	40701891 HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 10 1/2"	SQ YD	2022	2022						
	42001300 PROTECTIVE COAT	SQ YD	564	564						
	42001400 BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	535	535						
	42001430 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	87	87						
	42400200 PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	2610	2610						
	42400800 DETECTABLE WARNINGS	SQ FT	18	18						
	44000100 PAVEMENT REMOVAL	SQ YD	922	922						
	44000500 COMBINATION CURB AND GUTTER REMOVAL	FOOT	612	612						
	44000600 SIDEWALK REMOVAL	SQ FT	1740	1740						
	44000700 APPROACH SLAB REMOVAL	SQ YD	555	555						
	44300200 STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	1140	1140						
	50100100 REMOVAL OF EXISTING STRUCTURES	EACH	1		1					
	50104400 CONCRETE HEADWALL REMOVAL	EACH	2	2						
	50200100 STRUCTURE EXCAVATION	CU YD	282		282					
	50200300 COFFERDAM EXCAVATION	CU YD	444		444					
	50200600 COFFERDAM (PIER 1)	EACH	1		1					
	50200700 COFFERDAM (PIER 2)	EACH	1		1					
	50300225 CONCRETE STRUCTURES	CU YD	544.6	4.2	540.4					
	50300255 CONCRETE SUPERSTRUCTURE	CU YD	665.7	23.9	641.8					
	50300260 BRIDGE DECK GROOVING	SQ YD	1551		1551					

* SPECIALTY ITEMS
** NON PARTICIPATING ITEMS
*** Y080
~~△ 100% PARTICIPATION: VILLAGE OF SKOKIE~~

REVISIONS	
NAME	DATE

Rev.

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
SUMMARY OF QUANTITIES

SCALE: NONE — DRAWN BY JSS
DATE: OCT. 17, 2007 — CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

PROJECT: FAU RTE. 1312, EMERSON STREET OVER NORTH SHORE CHANNEL, COOK COUNTY

	SUMMARY OF QUANTITIES	UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
				80% FED 20% STATE			100% CITY OF EVANSTON			
	CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E		
	50300280	CONCRETE ENCASEMENT	CU YD	34.6		34.6				
	50300300	PROTECTIVE COAT	SQ YD	2032		2032				
	50400905	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 42 IN.	FOOT	2544		2544				
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	181480	2160	179320				
	50800515	BAR SPLICERS	EACH	162		162				
	50900105	ALUMINUM RAILING, TYPE L	FOOT	490	60	430				
	51201900	FURNISHING STEEL PILES HP 14x89	FOOT	5546		5546				
	51202305	DRIVING PILES	FOOT	5546		5546				
	51203900	TEST PILE STEEL HP14x89	EACH	4		4				
	51204650	PILE SHOES	EACH	62		62				
	51500100	NAME PLATES	EACH	1		1				
	54215436	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 36"	EACH	1	1					
	54215460	CAST-IN-PLACE REINFORCED CONCRETE END SECTIONS 60"	EACH	1	1					
	54216015	REINFORCED CONCRETE PIPE ELBOW 60"	EACH	1	1					
	5424A036	PIPE CULVERTS, CLASS A, TYPE 4 36" (TEMPORARY)	FOOT	55	55					
	550A0050	STORM SEWERS, CLASS A, TYPE 1, 12"	FOOT	75	75					
	55026600	STORM SEWERS, TYPE 4, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV 36"	FOOT	57	57					
	55027000	STORM SEWERS, TYPE 4, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV 60"	FOOT	68	68					
**	55039700	STORM SEWERS TO BE CLEANED	FOOT	115	115					
	55101600	STORM SEWER REMOVAL 36"	FOOT	55	55					
	55102100	STORM SEWER REMOVAL 60"	FOOT	68	68					
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	164		164				

	SUMMARY OF QUANTITIES	UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
				80% FED 20% STATE			100% CITY OF EVANSTON			
CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	65.7		65.7					
60107600	PIPE UNDERDRAINS 4"	FOOT	70	70						
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	248		248					
60201330	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 23 FRAME AND GRATE	EACH	2	2						
60237460	INLETS, TYPE A, TYPE 23 FRAME AND GRATE	EACH	1	1						
60250200	CATCH BASINS TO BE ADJUSTED	EACH	2	2						
60255500	MANHOLES TO BE ADJUSTED	EACH	3	3						
△60265700	VALVE VAULTS TO BE ADJUSTED	EACH	3	3						
△60266600	VALVE BOXES TO BE ADJUSTED	EACH	4	4						
60500050	REMOVING CATCH BASINS	EACH	2	2						
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	612	612						
66400305	CHAIN LINK FENCE, 6'	FOOT	215	215						
66410300	CHAIN LINK FENCE REMOVAL	FOOT	215	215						
66410400	CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED	FOOT	164	164						
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12						
67100100	MOBILIZATION	L SUM	1	1						
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1						
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1	1						
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	162	162						
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	12	12						
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	502	502						

✳ SPECIALTY ITEMS ✳✳✳ Y080

✳✳ NON PARTICIPATING ITEMS △ 100% PARTICIPATION: VILLAGE OF SKOKIE - Y060

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
SUMMARY OF QUANTITIES

SCALE: NONE DRAWN BY JSS
DATE: OCT. 17, 2007 CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	5
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

PROJECT: FAU RTE. 1312, EMERSON STREET OVER NORTH SHORE CHANNEL, COOK COUNTY

	SUMMARY OF QUANTITIES	UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
				80% FED 20% STATE			100% CITY OF EVANSTON			
CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
70300210	TEMPORARY PAVEMENT MARKING-LETTERS AND SYMBOLS	SQ FT	109	109						
70300220	TEMPORARY PAVEMENT MARKING-LINE 4"	FOOT	20	20						
70300240	TEMPORARY PAVEMENT MARKING-LINE 6"	FOOT	109	109						
70300280	TEMPORARY PAVEMENT MARKING-LINE 24"	FOOT	46	46						
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	263	263						
* 78000100	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS	SQ FT	234	234						
* 78000200	THERMOPLASTIC PAVEMENT MARKING-LINE 4"	FOOT	1634	1634						
* 78000400	THERMOPLASTIC PAVEMENT MARKING-LINE 6"	FOOT	326	326						
* 78000500	THERMOPLASTIC PAVEMENT MARKING-LINE 8"	FOOT	128	128						
* 78000600	THERMOPLASTIC PAVEMENT MARKING-LINE 12"	FOOT	77	77						
* 78000650	THERMOPLASTIC PAVEMENT MARKING-LINE 24"	FOOT	81	81						
* 78008200	POLYUREA PAVEMENT MARKING TYPE I-LETTERS AND SYMBOLS	SQ FT	157	157						
* 78008210	POLYUREA PAVEMENT MARKING TYPE I-LINE 4"	FOOT	1628	1628						
* 78008230	POLYUREA PAVEMENT MARKING TYPE I-LINE 6"	FOOT	125	125						
* 78008250	POLYUREA PAVEMENT MARKING TYPE I-LINE 12"	FOOT	24	24						
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4						
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	12	12						
78300100	PAVEMENT MARKING REMOVAL	SQ FT	263	263						
* 81304700	JUNCTION BOX EMBEDDED IN STRUCTURE 18"X18"X6"	EACH	4				4			
* 81400200	HEAVY-DUTY HANDHOLE	EACH	1			1				
* 81603150	UNIT DUCT, 600V, 2-1/C NO. 4, 1/C NO. 6 GROUND, (EPR-TYPE RHW), 1" DIA. POLYETHYLENE	FOOT	730				730			
* 81700120	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 6	FOOT	500				500			

	SUMMARY OF QUANTITIES	UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
				80% FED 20% STATE			100% CITY OF EVANSTON			
CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
* 81700125	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 4	FOOT	1000				1000			
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	560				560			
* 83000200	LIGHT POLE, ALUMINUM, 30 FT. M.H., 6 FT. DAVIT ARM	EACH	5				5			
* 83600200	LIGHT POLE FOUNDATION, 24" DIAMETER	FOOT	40				40			
* 84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	7				7			
* 84200700	LIGHTING FOUNDATION REMOVAL	EACH	4				4			
* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2			2				
* 85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2			2				
* 87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	627			627				
* 87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	161			161				
* 87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2			2				
* 87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3			3				
* 87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	3			3				
* 88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8			8				
* 88500100	INDUCTIVE LOOP DETECTOR	EACH	2			2				
* 88600100	DETECTOR LOOP, TYPE I	FOOT	170			170				
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	12			12				
* 88030020	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2			2				
* 88030050	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4			4				
* 88030100	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2			2				
* 88030110	SIGNAL HEAD, L.E.D, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6			6				

* SPECIALTY ITEMS
** NON PARTICIPATING ITEMS
*** Y080
~~△ 100% PARTICIPATION: VILLAGE OF SKOKIE~~

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
SUMMARY OF QUANTITIES

SCALE: NONE
DRAWN BY JSS
DATE: OCT. 17, 2007
CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

PROJECT: FAU RTE. 1312, EMERSON STREET OVER NORTH SHORE CHANNEL, COOK COUNTY

	SUMMARY OF QUANTITIES		UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
					80% FED 20% STATE			100% CITY OF EVANSTON			
	CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
*	88102710	PEDESTRIAN SIGNAL HEAD, L E D, 1-FACE, BRACKET MOUNTED	EACH	8			8				
*	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2			2				
*	A2004420	TREE, GINKGO BILOBA (GINKGO), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	2	2						
*	A2005020	TREE, GYMNOCLADUS DIOICUS (KENTUCKY COFFEETREE), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	3	3						
*	A2005216	TREE, LARIX DECIDUA (EUROPEAN LARCH), 2" CALIPER, BALLED AND BURLAPPED	EACH	2	2						
*	B2001166	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	2	2						
*	C2006036	SHRUB, RHUS TYPHINA (STAGHORN SUMAC), 3' HEIGHT, BALLED AND BURLAPPED	EACH	120	120						
	X0321556	SANITARY MANHOLES TO BE ADJUSTED	EACH	3	3						
	X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	103	103						
*	X0322324	WEED CONTROL TEASEL	POUND	0.02	0.02						
	X0322671	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	960	960						
*	X0322859	WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE	POUND	20	20						
	X0323817	SEDIMENT CONTROL, SILT CURTAIN	EACH	4	4						
*	X0323973	SEDIMENT CONTROL, SILT FENCE	FOOT	1545	1545						
*	X0323974	SEDIMENT CONTROL, SILT FENCE MAINTENANCE	FOOT	1545	1545						
	X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1002		1002					
	X6640200	TEMPORARY CHAIN LINK FENCE	FOOT	600	600						
*	X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	2			2				
*	X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	117			117				
*	88030210	SIGNAL HEAD, L E D, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1			1				
*	88030240	SIGNAL HEAD, L E D, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	5			5				

	SUMMARY OF QUANTITIES		UNIT	TOTAL QTY.	CONSTRUCTION TYPE CODE						
					80% FED 20% STATE			100% CITY OF EVANSTON			
	CODE NO.	ITEM			ROADWAY I000-2A	BRIDGE X231-2A	TRAFFIC SIGNAL Y031-1F	LIGHTING Y030-1E			
*	88030320	SIGNAL HEAD, L E D, 3-FACE, 1-3 SECTION, 2-5 SECTION BRACKET MOUNTED	EACH	1			1				
*	88102740	PEDESTRIAN SIGNAL HEAD, L E D, 2-FACE, BRACKET MOUNTED	EACH	4			4				
	XX003140	SHORT-TERM PAVEMENT MARKING REMOVAL	FOOT	502	502						
	XX005656	INLET FILTER CLEANING	EACH	5	5						
	X8620020	UNINTERRUPTABLE POWER SUPPLY	EACH	2			2				
	Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	2568	2568						
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1						
**	Z0018500	DRAINAGE STRUCTURES TO BE CLEANED	EACH	5	5						
	Z0064800	SELECTIVE CLEARING	UNIT	1	1						
***	Z0076600	TRAINEES	HOUR	1500	1500						
*	X0325737	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2			2				
*	X0325881	LUMINAIRE, MERCURY VAPOR, 400 WATT	EACH	8				8			
*	X0325882	LIGHT POLE, ALUMINUM, 30FT M.H., 6FT DAVIT ARM, BRIDGE MOUNTED	EACH	3				3			
*	A2006516	TREE, (SWAMP WHITE OAK) QUERCUS BICOLOR, 2" CALIPER, BALLED AND BURLAPPED	EACH	3	3						

* SPECIALTY ITEMS
** NON PARTICIPATING ITEMS
*** Y080
~~△ 100% PARTICIPATION, VILLAGE OF SKOKIE~~

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
SUMMARY OF QUANTITIES

SCALE: NONE
DATE: OCT. 17, 2007
DRAWN BY JSS
CHECKED BY JP

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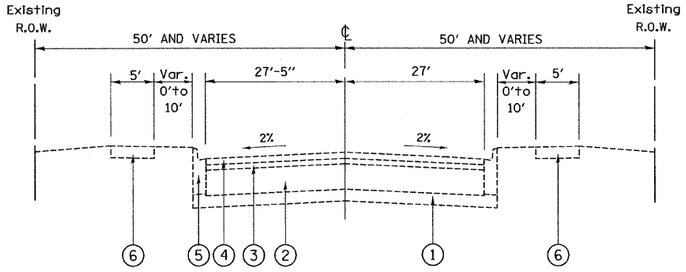
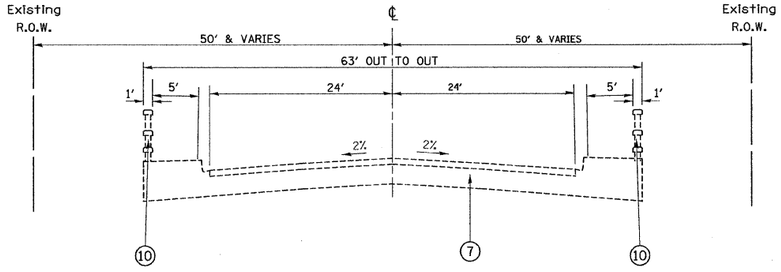
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98



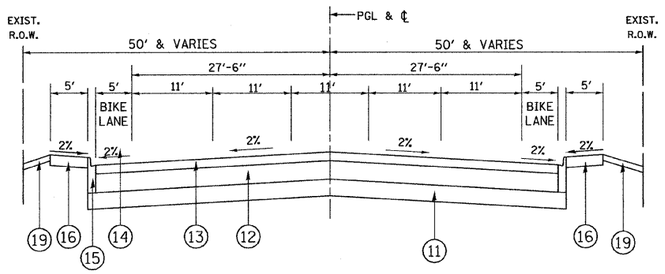
EXISTING TYPICAL SECTION
EMERSON STREET

STA. 100+32 TO STA. 101+47.29
STA. 104+21.91 TO STA. 105+86.55



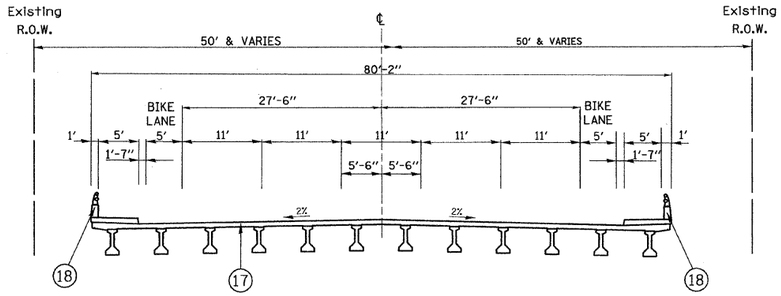
EXISTING BRIDGE TYPICAL SECTION
EMERSON STREET

STA. 101+77.29 TO STA. 103+91.95
(BRIDGE)



PROPOSED TYPICAL SECTION
EMERSON STREET

STA. 100+32 TO STA. 101+47.29
STA. 104+21.91 TO STA. 105+86.55



PROPOSED BRIDGE TYPICAL SECTION
EMERSON STREET

STA. 101+77.29 TO STA. 103+91.95
(BRIDGE)
SN 016-0655 (EXIST.)
SN 016-2858 (PROP.)

LEGEND:

1. EXISTING SUB-BASE AGGREGATE MATERIAL, 4" & VARIES (R)
2. EXISTING PCC PAVEMENT, 9" (R)
3. EXISTING BITUMINOUS LEVELING BINDER COURSE, 1 1/2" (R)
4. EXISTING BITUMINOUS SURFACE COURSE, 1 1/2" (R)
5. EXISTING COMBINATION CONCRETE C&G, B-6.12 (R)
6. EXISTING PCC SIDEWALK (TYP.) (R)
7. EXISTING RCC BOX BEAM SUPERSTRUCTURE (R)
8. EXISTING BITUMINOUS ASPHALT SURFACE COURSE OVERLAY, 1 1/2" (R)
9. NOT USED
10. EXISTING STEEL HANDRAIL (R)
11. PROP. AGGREGATE SUBGRADE, 12"
12. PROP. HOT-MIX ASPHALT BINDER COURSE, 8 1/2", IL 19, N70
13. PROP. HOT-MIX ASPHALT SURFACE COURSE (IL 9.5mm); 2". MIX "D". N70
14. PROP. SHARED BICYCLE/TRAFFIC LANE
15. PROP. COMBINATION CONCRETE C&G, B-6.12
16. PROP. PCC SIDEWALK, 5" (TYP.)
17. PROP. PCC BRIDGE DECK
18. PROP. PARAPET WALL WITH RAILING ON TOP
19. PROP. TOPSOIL, 4" & SODDING, SALT TOLERANT

(R) INDICATES REMOVAL

HOT - MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AC TYPE	AIR VOIDS
FULL DEPTH PAVEMENT	PG 64-22	4 @ 70 GYR.
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL 9.5 mm); 2"		
HOT-MIX ASPHALT BINDER COURSE, N70, IL-19, 8 1/2"	PG 64-22	4 @ 70 GYR.

NOTE: THE UNIT WEIGHT USED TO CALCULATE ALL HOT MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SQ YD/IN

STRUCTURAL DESIGN TRAFFIC: Year 2017

PV = 18,838 SU = 361 MU = 361

ROAD/STREET CLASSIFICATION: Class 1

PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:

P = 50% S = 50% M = 50%

TRAFFIC FACTOR: Actual TF = 2.49 AC Type = 10

Minimum TF = _____

AC GRADE: Binder = PG 64-22 Surface = PG 64-22

SUBGRADE SUPPORT RATING:

SSR = POOR (Sta. 100+32 to 105+86.56)

SSR = _____ (Sta. _____ to _____)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
EXISTING AND PROPOSED
TYPICAL SECTIONS

SCALE: NONE DRAWN BY JSS
DATE: OCT. 17, 2007 CHECKED BY JP

Rev.

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

TREE REMOVAL (6 TO 15 UNITS DIAMETER)

STATION	OFFSET	DIAMETER (IN)	QUANTITY (UNITS)
101+16.4	66.4' RT	6	6
101+49.5	48.0' LT	6	6
101+63.1	55.6' RT	6	6
101+67.7	32.1' RT	6	6
101+71.1	36.2' RT	6	6
101+98.5	33.2' LT	6	6
102+04.7	32.0' LT	8	8
102+36.3	44.4' LT	7	7
103+44.6	46.1' RT	7	7
103+44.6	46.1' RT	6	6
103+44.6	46.1' RT	6	6
103+62.6	30.9' RT	7	7
103+64.8	33.1' RT	6	6
103+70.7	34.2' LT	11	11
103+71.4	54.4' LT	6	6
103+75.3	48.2' LT	15	15
103+81.5	36.0' LT	13	13
103+88.1	46.7' LT	7	7
103+93.0	57.9' LT	7	7
104+18.6	39.2' RT	11	11
104+26.9	35.0' LT	8	8
104+26.9	35.0' LT	6	6
104+26.9	35.0' LT	7	7
104+26.9	35.0' LT	6	6
104+43.9	43.4' RT	7	7
		TOTAL	187

TREE REMOVAL (OVER 15 UNITS DIAMETER)

STATION	OFFSET	DIAMETER (IN)	QUANTITY (UNITS)
101+69.3	39.5' LT	20	20
104+00.7	36.0' RT	16	16
104+18.6	39.2' RT	16	16
		TOTAL	52

DRAINAGE STRUCTURES TO BE CLEANED

STATION	OFFSET	EACH
100+80	29.2' RT	1
100+82	29.1' LT	1
100+46	25.9' RT	1
105+90	48.5' RT	1
105+90	24.3' LT	1
	TOTAL	5

MANHOLES TO BE ADJUSTED

STATION	OFFSET	EACH
100+08	72.3' RT	1
100+28	25.1' RT	1
100+36	28.6' RT	1
	TOTAL	3

PIPE UNDERDRAIN 4''

FROM STATION	TO STATION	STRUCTURE NOS.	LENGTH (FEET)
100+90 LT	100+75 RT	2-3	70
		TOTAL	70

TREE TRUNK PROTECTION

STATION	OFFSET	DIAMETER (IN)	QUANTITY (EACH)
100+90.2	97.9' LT.	36	1
100+91.3	48.2' LT.	30	1
101+16.4	66.4' RT.	6	1
101+49.5	48.0' LT.	6	1
102+08.2	60.2' LT.	8	1
102+32.5	54.4' LT.	5	1
102+35.1	78.6' LT.	7	1
102+49.1	64.2' LT.	4	1
103+71.4	55.4' LT.	6	1
103+75.3	48.2' LT.	15	1
103+75.8	64.9' LT.	7	1
103+77.7	70.7' LT.	5	1
103+86.2	132.4' RT	7	1
103+87.0	47.7' LT.	6	1
103+87.8	46.5' LT.	6	1
103+88.1	46.7' LT	7	1
103+91.6	43.1' LT.	4	1
103+93.0	57.9' LT.	7	1
103+99.0	40.7' LT	4	1
103+99.1	47.9' LT.	4	1
103+99.6	49.7' LT.	4	1
104+00.2	43.2' LT.	16	1
104+00.2	43.2' LT.	9	1
104+00.3	51.3' LT.	4	1
104+04.6	74.4' LT.	9	1
104+06.0	96.3' RT	7	1
104+08.0	85.1' LT.	6	1
104+08.8	71.6' LT.	7	1
104+10.3	76.7' LT.	7	1
104+10.4	81.9' LT.	12	1
104+11.8	80.0' LT.	7	1
104+32.9	75.2' LT.	6	1
104+32.9	75.2' LT.	6	1
104+40.3	61.9' LT.	6	1
104+41.1	44.5' LT.	6	1
104+51.8	67.4' LT.	5	1
104+51.8	67.4' LT.	4	1
104+51.8	67.4' LT.	4	1
104+51.8	67.4' LT.	5	1
104+99.4	51.7' RT.	6	1
105+38.8	30.0' LT.	12	1
		TOTAL	41

CATCH BASINS TO BE ADJUSTED

STATION	OFFSET	EACH
100+09	66.9' RT	1
100+60	71.2' LT	1
	TOTAL	2

SANITARY MANHOLES TO BE ADJUSTED

STATION	OFFSET	EACH
100+36	28.3' RT	1
101+12	36.8' RT	1
101+30	37.4' RT	1
	TOTAL	3

VALVE VAULTS TO BE ADJUSTED

STATION	OFFSET	EACH
100+31	11.6' RT	1
100+48	9.4' LT	1
100+60	24.8' RT	1
	TOTAL	3

REMOVING CATCH BASINS

STATION	OFFSET	EACH
100+80	29.2' RT	1
100+82	29.1' LT	1
	TOTAL	2

VALVE BOXES TO BE ADJUSTED

STATION	OFFSET	EACH
100+32	30.7' RT	1
100+46	33.1' RT	1
100+57	6.7' LT	1
100+59	21.8' LT	1
	TOTAL	4

CHAIN LINK FENCE REMOVAL

STATION	QUANTITY (FOOT)
102±00 RT	135
102±00 LT	80
TOTAL	215

TEMPORARY CHAIN LINK FENCE

STATION	QUANTITY (FOOT)
102±00 RT	150
102±00 LT	150
104±00 RT	150
104±00 LT	150
TOTAL	600

CHAIN LINK FENCE TO BE REMOVED AND RE-ERECTED

STATION	QUANTITY (FOOT)
104±00 LT	88
104±00 RT	76
TOTAL	164

CHAIN LINK FENCE, 6'

STATION	QUANTITY (FOOT)
102±00 LT	80
102±00 RT	135
TOTAL	215

APPROACH SLAB REMOVAL

FROM STATION	TO STATION	QUANTITY (SQ YD)
101±22	101±72	277.5
104±24	104±74	277.5
	TOTAL	555

TEMPORARY PAVEMENT MARKING

LOCATION STA. - STA.	LETTERS & SYMBOLS (SQ FT)	LINE 4 IN (FT)	LINE 6 IN (FT)	LINE 24 IN (FT)
99±00 TO STA. 99±50	109	20	109	46
SUBTOTAL	109	20	109	46
TOTAL	109	20	109	46

POLYUREA PAVEMENT MARKING

LOCATION STA. - STA.	LETTERS & SYMBOLS (SQ FT)	LINE 4 IN (FT)	LINE 6 IN (FT)	LINE 12 IN (FT)
101+77.29 TO 103+91.95	157	1628	30	24
SUBTOTAL	157	1628	95	24
TOTAL	157	1628	125	24

EARTHWORK

STATION	EARTH EXCAVATION CU. YD.	EMBANKMENT CU. YD.	ADJ. EXCAVATION 15% CU. YD.	BALANCE WASTE (+) OR SHORTAGE (-)
101+00.00	422	0	358	358
104+40.00	540	211	459	248
105+00.00	347	0	295	295
GRADING (WEST CROSSECTION)	156	54	133	79
GRADING (EAST CROSSECTION)	260	9	221	12
SUBTOTAL	1725	274	1466	1192
TOTAL	1725	274	1466	1192

THERMOPLASTIC PAVEMENT MARKINGS

LOCATION STA. - STA.	LETTERS & SYMBOLS (SQ FT)	LINE 4 IN (FT)	LINE 6 IN (FT)	LINE 8 IN (FT)	LINE 12 IN (FT)	LINE 24 IN (FT)
99±00 TO STA. 99±50	37	40	110	128	61	48
100+32.00 TO 101+77.29	117	402	216			33
103+91.95 TO 105+86.55	80	1192			16	
SUBTOTAL	234	1634	326	128	77	81
TOTAL	234	1634	326	128	77	81

EROSION CONTROL ITEMS

LOCATION STATION TO STATION	TEMPORARY EROSION CONTROL SEEDING (POUND)	SEEDING, CLASS 3 (ACRE)	SODDING, SAL TOLERANT (SQ YD)	EROSION CONTROL BLANKET (SQ YD)	INLET FILTERS (EACH)
100+32.00 TO 101+77.29	12	0.04	1438	194	2
103+91.95 TO 105+86.55	28	0.16	2947	798	3
TOTAL	40	0.20	4385	992	5

PAVEMENT REMOVAL

FROM STATION	TO STATION	QUANTITY (SQ YD)
100+32	102+07.29	421
104+21.95	105+86.55	501
	TOTAL	922

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
SCHEDULE OF QUANTITIES

SCALE: NONE — DRAWN BY JSS
DATE: OCT. 17, 2007 — CHECKED BY JP

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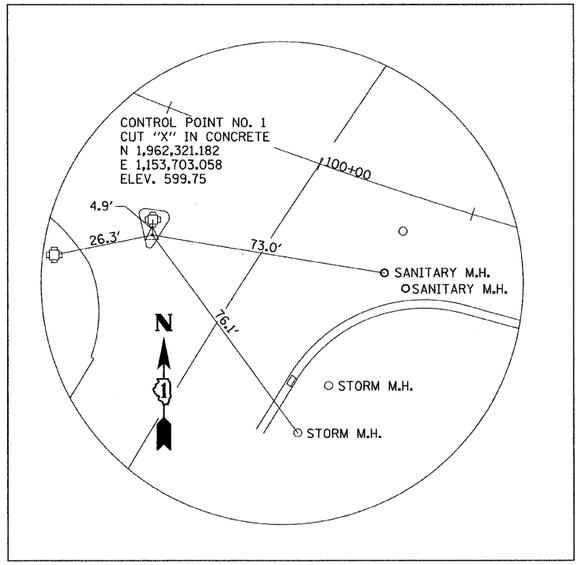
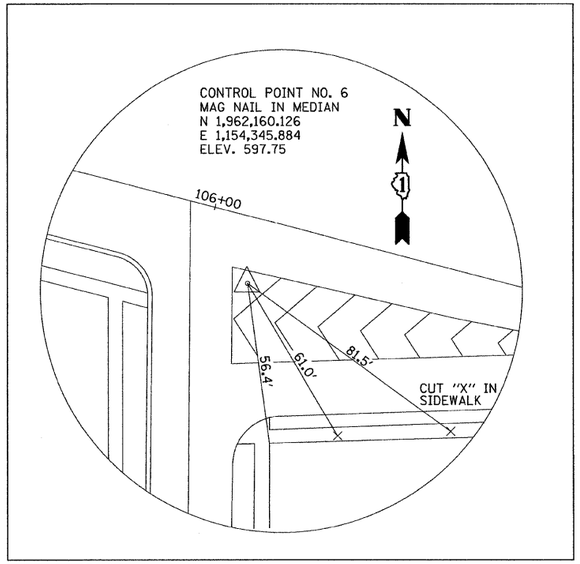
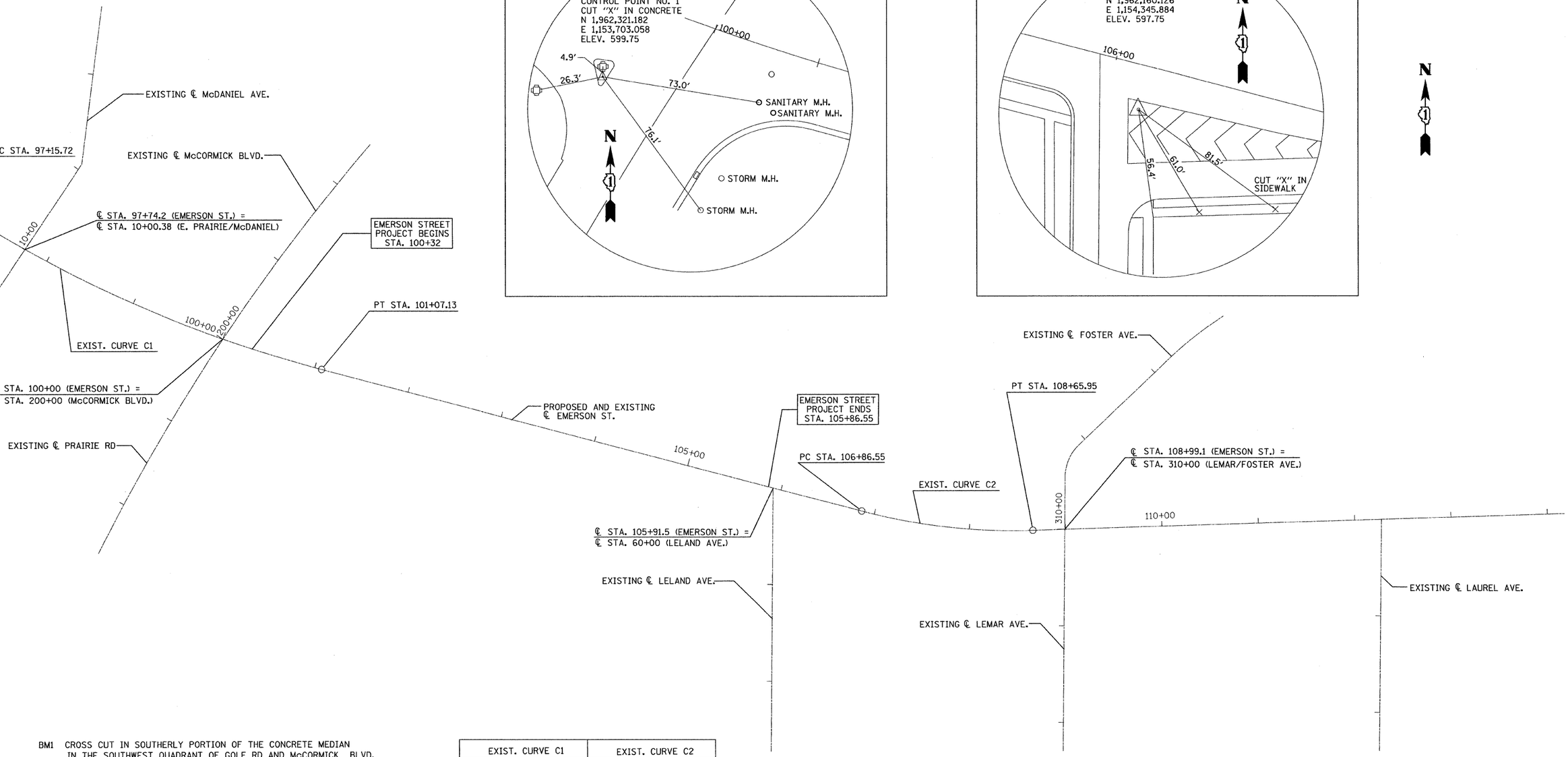
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98







BM1 CROSS CUT IN SOUTHERLY PORTION OF THE CONCRETE MEDIAN IN THE SOUTHWEST QUADRANT OF GOLF RD AND McCORMICK BLVD.
ELEVATION = 599.75

BM3 MAG NAIL NEAR THE NORTHWEST CORNER OF THE PAINTED MEDIAN IN THE SOUTHEAST QUADRANT OF GOLF/EMERSON ST. AND LELAND AVENUE.
ELEVATION = 597.75

EXIST. CURVE C1	EXIST. CURVE C2
PI STA. = 99+12.94	PI STA. = 107+76.88
Δ = 17° 21′ 58″ (LT)	Δ = 16° 28′ 50″ (LT)
D = 4° 26′ 13″	D = 9° 11′ 11″
R = 1,291.36′	R = 623.70′
T = 197.22′	T = 90.32′
L = 391.41′	L = 179.40′
E = 14.97′	E = 6.51′
e =	e =
T.R. =	T.R. =
S.E. RUN =	S.E. RUN =
P.C. STA = 97+15.72	P.C. STA = 106+86.55
P.T. STA = 101+07.13	P.T. STA = 108+65.95

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
ALIGNMENT, TIES AND BENCHMARKS

SCALE: 1" = 50′ DRAWN BY JSS

DATE: OCT. 17, 2007 CHECKED BY JP

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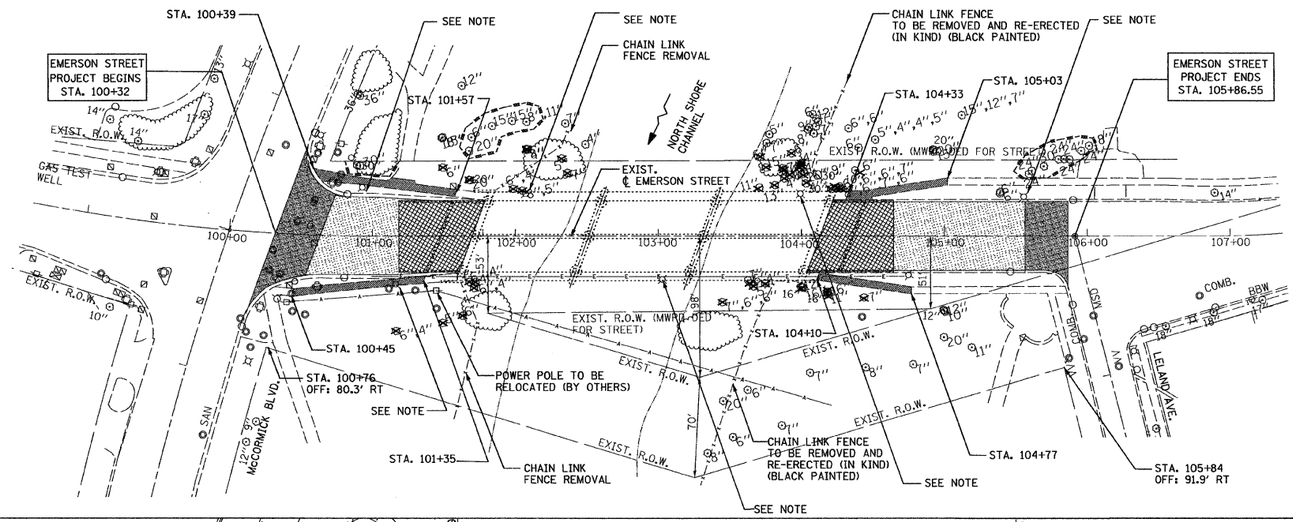
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

PLAN
SURVEYED
DRAWN
ALIGNMENT CHECKED
PT. OF BEG. CHECKED
NOTE BOOK
NO. _____
CADD FILE NAME
BY
DATE

EXISTING EMERSON STREET



PAVEMENT REMOVAL

HMA SURFACE REMOVAL-BUTT JOINT (30' WIDE)

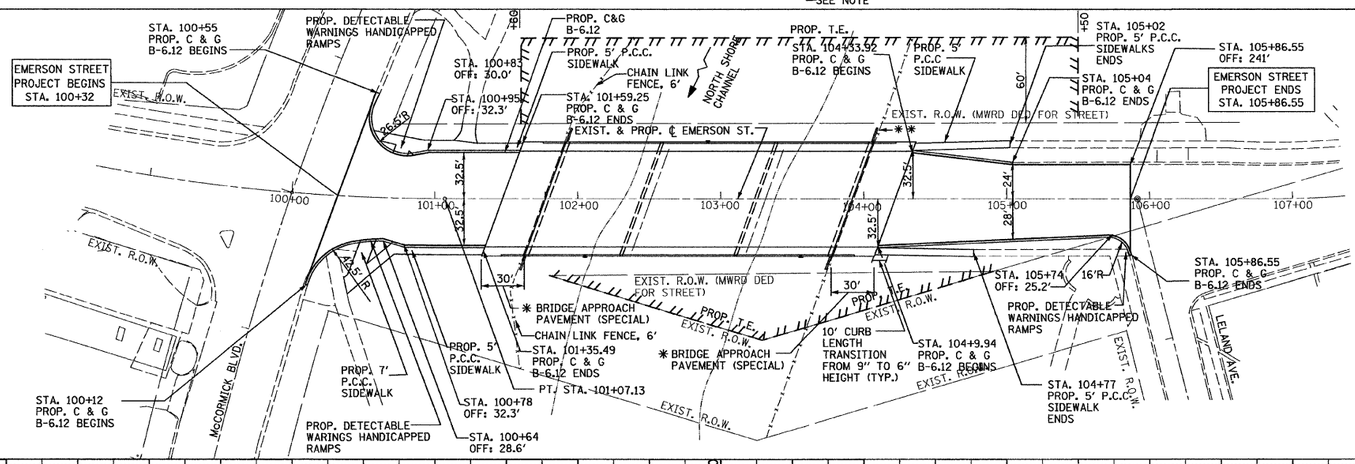
SIDEWALK REMOVAL

APPROACH SLAB REMOVAL

NOTE:

1. REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE SEE LIGHTING PLAN SHEETS.
2. EXISTING SKOKIE PARK DISTRICT SIGNS LOCATED AT THE SOUTHEAST CORNER OF EMERSON ST. AND McCORMICK BLVD. SHALL BE PROTECTED DURING CONSTRUCTION AND COST OF THIS WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEM.
3. SEE TRAFFIC SIGNAL MODERNIZATION PLANS FOR THE INTERSECTIONS OF EMERSON ST. AT PRAIRIE RD/ McDANIEL AVE. AND McCORMICK BLVD.

PROPOSED EMERSON STREET



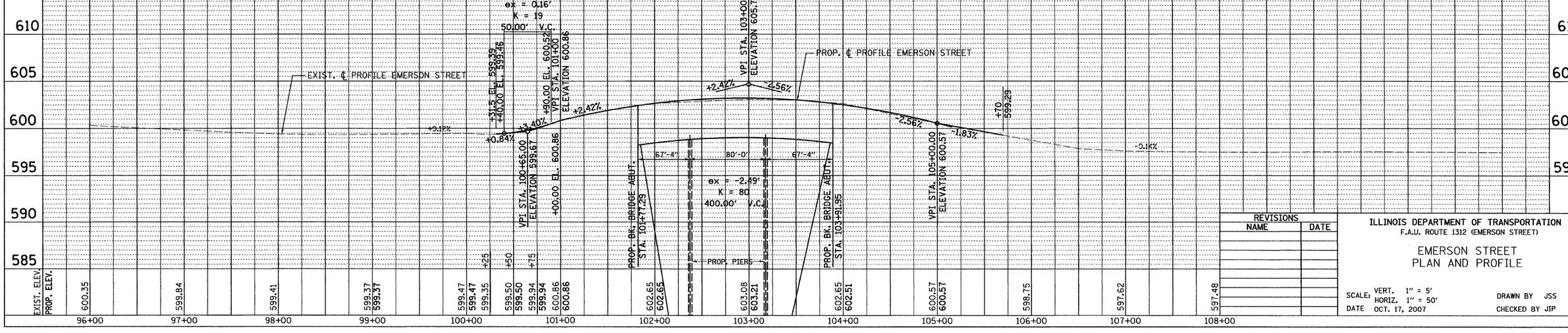
NOTE:
EXISTING HANDICAPPED SIDEWALK RAMPS AND DETECTIBLE WARNINGS AT THE NORTHEAST AND SOUTHEAST QUADRANTS OF EMERSON STREET AND MCCORMICK BLVD. SHALL BE SAVED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

HOT-MIX ASPHALT (FULL DEPTH), 10 1/2 "
12" AGGREGATE SUBGRADE
STA. 100+32 TO STA. 101+47.29
STA. 104+21.91 TO STA. 105+86.56

✱ SEE SHEETS 43 AND 66 OF STRUCTURAL PLANS FOR ADDITIONAL BRIDGE APPROACH PAVEMENT (SPECIAL) DETAILS.

✱✱ INSTALL PROP. CHAIN LINK FENCE BEHIND WINGWALL, TIGHT AGAINST PARAPET (TYP.)

PROFILE
SURVEYED
DRAWN
ALIGNMENT CHECKED
PT. OF BEG. CHECKED
NOTE BOOK
NO. _____
STRUCTURE NO/FAP/SN. CH/RD
BY
DATE



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
PLAN AND PROFILE

SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'
DATE OCT. 17, 2007

DRAWN BY JSS
CHECKED BY JIP

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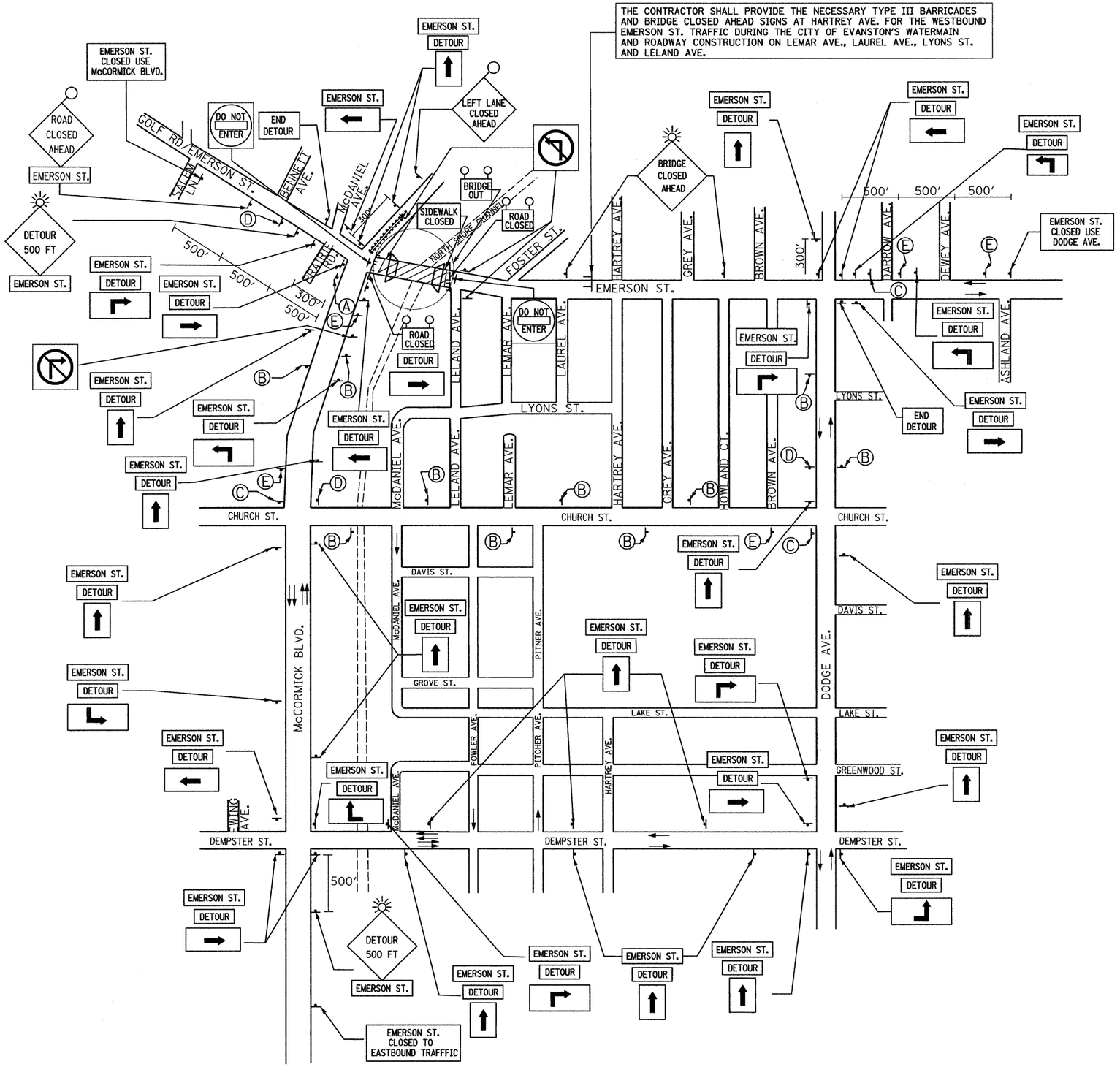
THE CONTRACTOR SHALL PROVIDE THE NECESSARY TYPE III BARRICADES AND BRIDGE CLOSED AHEAD SIGNS AT HARTREY AVE. FOR THE WESTBOUND EMERSON ST. TRAFFIC DURING THE CITY OF EVANSTON'S WATERMAIN AND ROADWAY CONSTRUCTION ON LEMAR AVE., LAUREL AVE., LYONS ST. AND LELAND AVE.



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SIGN LEGEND

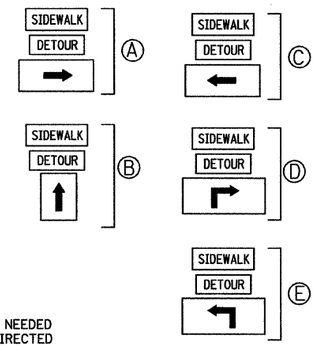
ROAD CLOSED AHEAD	ADVANCE ROAD CLOSED SIGNS W20-1 48″x 48″ WITH AMBER FLASHING LIGHT
BRIDGE CLOSED AHEAD	ADVANCE BRIDGE CLOSED SIGNS W20-1 36″x 36″ WITH AMBER FLASHING LIGHT
DETOUR 500 FT	ADVANCE DETOUR SIGNS W20-2 36″x 36″
DETOUR	DETOUR ASSEMBLY SIGN M4-8 24″x 12″
	DETOUR ARROW SIGNS M5-1 21″x 15″
	DETOUR ARROW SIGNS M6-3 21″x 15″
	DETOUR ARROW SIGNS M6-1 21x 15″
END DETOUR	END DETOUR SIGN M6-3 21″X 15″
BRIDGE OUT / ROAD CLOSED	BRDGE OUT, ROAD CLOSED SIGN R11-2 48″X 30″
EMERSON ST. CLOSED	R11-2 48″X 30″
EMERSON ST. CLOSED USE DODGE AVE.	R11-3a 60″X 30″ (SEE NOTE 3)
EMERSON ST. CLOSED USE McCORMICK BLVD.	R11-3a 60″X 30″ (SEE NOTE 3)
EMERSON ST. CLOSED TO EASTBOUND TRAFFFIC	R11-3a 60″X 30″ (SEE NOTE 3)
SIDEWALK CLOSED	SIDEWALK CLOSED SIGN R9-9 24″x 12″
	TYPE III BARRICADE WITH TWO AMBER FLASHING LIGHTS EACH BARRICADE. NUMBER OF BARRICADES REQUIRED AS NEEDED TO PROVIDE ADEQUATE CLOSURE AS DIRECTED BY THE ENGINEER

EMERSON ST.	ROAD NAME SIGN 48″x 18″
	R3-1 30″X 30″
	R3-2 30″X 30″
LEFT LANE CLOSED AHEAD	w20-5 48″X 48″
DO NOT ENTER	R5-1 30″X 30″

NOTE:

1. ALL DETOUR SIGNING SHALL BE PAID AS "TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR, L SUM, IN ACCORDANCE WITH SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF EVANSTON ONE MONTH PRIOR TO THE BRIDGE CLOSURE. DETOUR ROUTES AND ASSOCIATED SIGNAGE WILL NEED TO BE IN PLACE TWO WEEKS PRIOR TO CLOSURE. THE TRAFFIC WILL BE DETOURED ALONG DODGE AVENUE, DEMPSTER STREET AND MCCORMICK BOULEVARD.
3. PARKWAY SPACE IS LIMITED. THE CONTRACTOR WILL MAKE SURE THAT THESE SIGNS DO NOT BLOCK THE SIDEWALK OR EXTEND ONTO THE STREET.

SIDEWALK — SIDEWALK SIGN 24″x 12″



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
DETOUR PLAN

SCALE: NONE — DRAWN BY JSS
DATE: OCT. 17, 2007 — CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

TEMPORARY PAVEMENT MARKING-LINE 6" 2' LENGTH, 6' SKIP (TYP.)

TEMPORARY PAVEMENT MARKING-LINE 4", WHITE 10' LENGTH, 30' SKIP (TYP.)

TEMPORARY PAVEMENT MARKING-LETTER AND SYMBOLS (TYP.)

TEMPORARY PAVEMENT MARKING-LINE 24", STOP BAR (TYP.)

PROP. DRUMS WITH STEADY BURN MONODIRECTIONAL LIGHT (TYP.)

EMERSON ST.

McDANIEL AVE.

PRAIRIE RD.

McCORMICK BLVD.

NORTH SHORE CHANNEL

FOSTER ST.

LELAND AVE.

LEMAR AVE.

STA. 98+20

STA. 98+92.93

STA. 98+85.70

STA. 99+40

STA. 200+62

STA. 203+62

25' (TYP.)

12' & VARIES

12'-12'-12'-12'

PROJECT BEGINS STA. 100+32

PROJECT ENDS STA. 105+86.55

BRIDGE CLOSURE AS PER STANDARD 702001

PAVEMENT MARKING TAPE, TYPE III, 6" (TYP.)

14'-15'

N

1

R11-2 48"x 30" EMERSON ST. CLOSED
M6-1 21"x 15"

EMERSON ST. CLOSED R11-2 48"x 30"

EMERSON ST. CLOSED R11-2 48"x 30"
M6-1 21"x 15"

BRIDGE CLOSED AHEAD W20-1 36"x 36"

ROAD CLOSED R11-2 48"x 30"

SIDEWALK CLOSED R9-9 24"x 12"

R3-2 30"x 30"

SIDEWALK CLOSED R9-9 24"x 12"

SIDEWALK CLOSED R9-9 24"x 12"

W11-1 18"x18"
M6-1 21"x 15"

SIDEWALK CLOSED AHEAD CROSS HERE R9-11 24"x 12"

R3-2 30"x 30"

ROAD CLOSED R11-2 48"x 30"

BRIDGE CLOSED AHEAD W20-1 36"x 36"

ROAD CONSTRUCTION AHEAD W20-1 48"x 48"

DO NOT ENTER R5-1 30"x 30"

SIDEWALK CLOSED AHEAD CROSS HERE R9-11 24"x 12"

W11-1 18"x18"
M6-1 21"x 15"

R3-1 30"x 30"

R11-2 48"x 30" EMERSON ST. CLOSED
M6-1 21"x 15"

R3-2 30"x 30"

EMERSON ST. CLOSED R11-2 48"x 30"
M6-1 21"x 15"

ROAD CONSTRUCTION AHEAD W20-1 48"x 48"

END CONSTRUCTION G20-2 60"x 24"

EMERSON ST CLOSED AHEAD.

ROAD CONSTRUCTION AHEAD W20-1 48"x 48"

NOTES:

NUMBER OF BARRICADES REQUIRED AS DIRECTED BY THE ENGINEER, TO ENSURE PROPER CLOSURE.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
LANE CONFIGURATION
DURING BRIDGE CLOSURE

SCALE: 1" = 50' DRAWN BY JSS

DATE: OCT. 17, 2007 CHECKED BY JP

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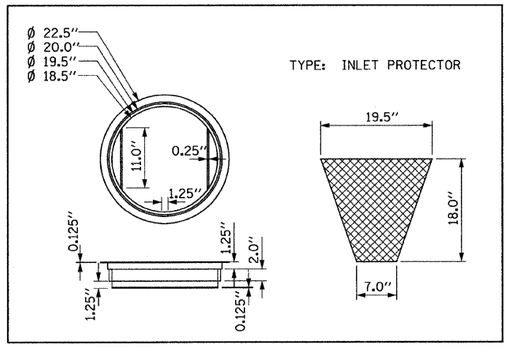
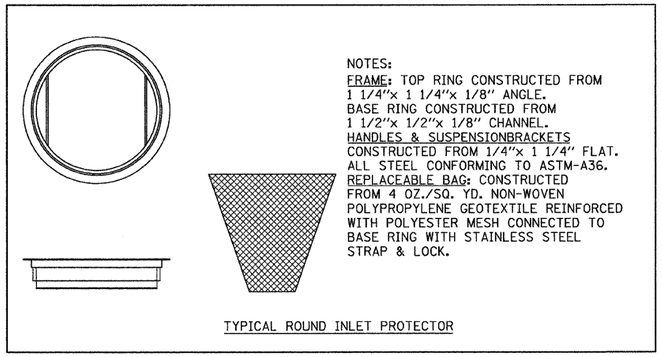
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

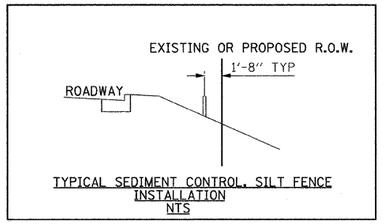
CONTRACT NO. 60B98



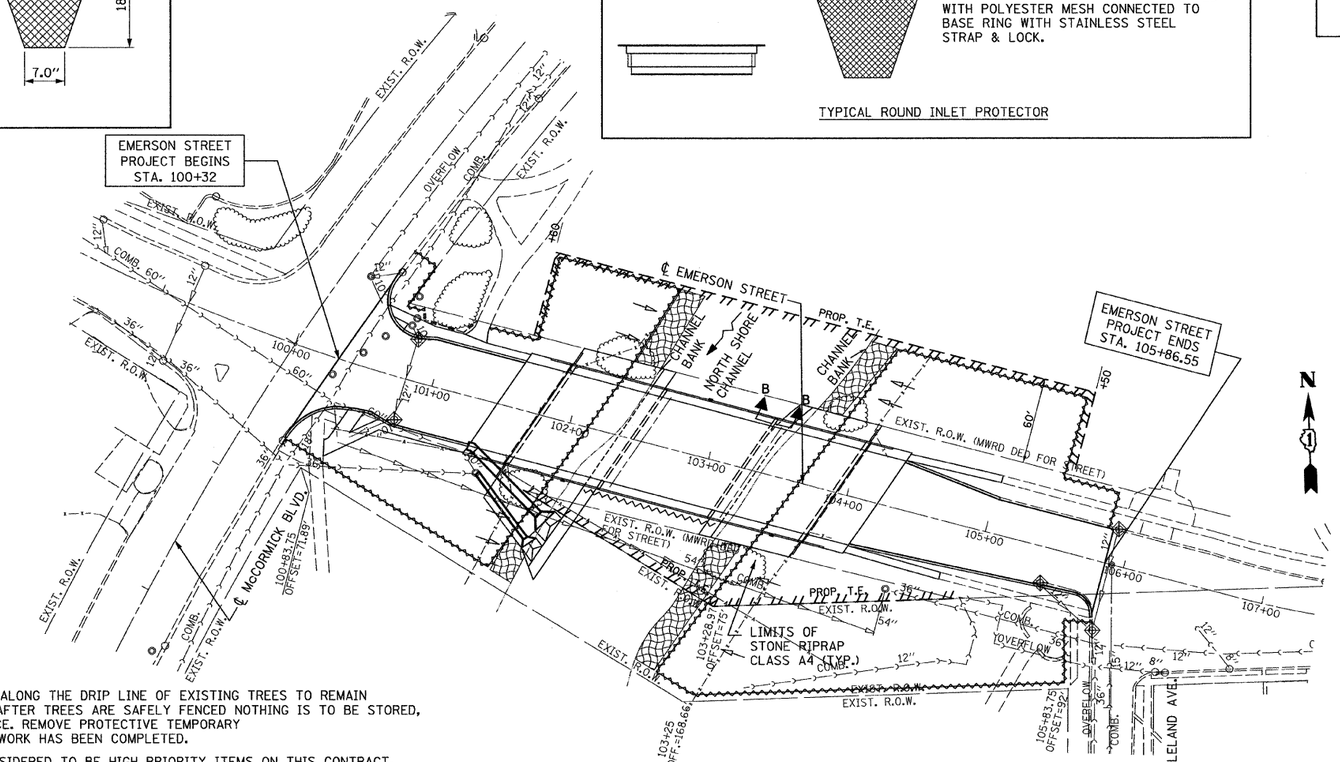


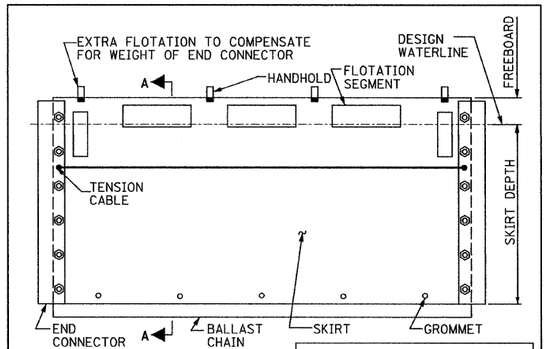
NOTES:
FRAME: TOP RING CONSTRUCTED FROM 1 1/4"x 1 1/4"x 1/8" ANGLE. BASE RING CONSTRUCTED FROM 1 1/2"x 1/2"x 1/8" CHANNEL. HANDLES & SUSPENSIONBRACKETS CONSTRUCTED FROM 1/4"x 1 1/4" FLAT. ALL STEEL CONFORMING TO ASTM-A36. REPLACEABLE BAG: CONSTRUCTED FROM 4 OZ./SQ. YD. NON-WOVEN POLYPROPYLENE GEOTEXTILE REINFORCED WITH POLYESTER MESH CONNECTED TO BASE RING WITH STAINLESS STEEL STRAP & LOCK.

TYPICAL ROUND INLET PROTECTOR

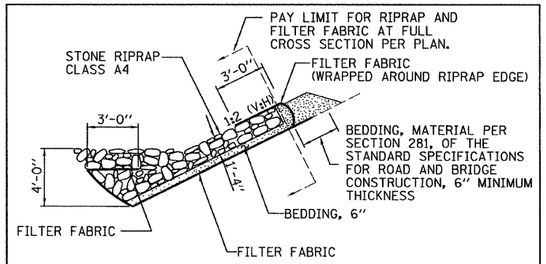


TYPICAL SEDIMENT CONTROL, SILT FENCE INSTALLATION
NTS





SEDIMENT CONTROL, SILT CURTAIN DETAIL (TYP.)



RIPRAP PLACEMENT IN STAGES
SECTION B-B (TYP.)
NTS

LEGEND

- EROSION CONTROL BLANKET
- SEDIMENT CONTROL, SILT FENCE
- SEDIMENT CONTROL DRAINAGE STRUCTURE, INLET FILTERS (TYP.)
- SHEET FLOW
- TEMPORARY FENCE

GENERAL NOTES

1. TEMPORARY FENCE SHOULD BE ERECTED ALONG THE DRIP LINE OF EXISTING TREES TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION. AFTER TREES ARE SAFELY FENCED NOTHING IS TO BE STORED, DRIVEN, OR DISTURBED INSIDE THE FENCE. REMOVE PROTECTIVE TEMPORARY FENCE ONLY AFTER ALL CONSTRUCTION WORK HAS BEEN COMPLETED.
2. EROSION CONTROL WORK ITEMS ARE CONSIDERED TO BE HIGH PRIORITY ITEMS ON THIS CONTRACT. THE ENGINEER WILL IMPLEMENT ALL PROVISIONS OF THE SPECIFICATION NECESSARY TO ASSURE THAT EROSION CONTROL ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY WAY. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WHICH WILL POTENTIALLY CREATE ERODABLE CONDITIONS.
3. THE LANDSCAPING AND EROSION CONTROL MEASURES SHOWN ARE BUT A GRAPHICAL REPRESENTATION OF SUGGESTED MEASURES. DEVIATIONS FROM THIS PLAN ARE TO BE EXPECTED PENDING A JOB SITE INSPECTION BETWEEN THE CONTRACTOR AND THE DEPARTMENT.
4. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED FEBRUARY 2002.
5. THE NORTH COOK SOIL AND WATER CONSERVATION DISTRICT (NCSWCD) AND CORPS OF ENGINEERS MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE NCSWCD AND CORPS OF ENGINEERS.
8. ALL EROSION CONTROL MEASURES MUST BE INSPECTED EVERY 7 DAYS AND AFTER EACH 1/2" RAIN EVENT.
9. EROSION CONTROL BLANKET AND/OR STRAW MULCH WITH NETTING (DEPENDING ON SLOPE, SLOPE LENGTH, AND FLOW RATES) SHALL BE INSTALLED ON ALL SLOPES AND IN CRITICAL AREAS (i.e. PERIMETERS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING.
10. IN AREAS WHERE WORK IS COMPLETE, PERMANENT STABILIZATION SHALL OCCUR WITHIN 7 DAYS OF COMPLETION, AND IN AREAS WHERE WORK HAS TEMPORARILY CEASED FOR 21 DAYS OR MORE, TEMPORARY STABILIZATION SHALL OCCUR BY THE 14th DAY AFTER WORK HAS CEASED.
11. NO WORK SHALL BE PERFORMED IN FLOWING WATER. WORK IN AND NEAR THE CRITICAL AREAS SHOULD BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOW. THE STREAM BANKS SHOULD BE STABILIZED AT THE END OF EACH DAY. ONCE WORK IN THIS AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS.
12. ALL DISTURBED AREAS AND WORK AREAS MUST BE ISOLATED FROM CHANNEL FLOWS AT ALL TIMES. THE DIVERSION/ISOLATION OF THE CHANNEL FLOWS MUST BE CONSTRUCTED FROM NON-ERODIBLE MATERIALS. THE NCSWCD MUST BE IN AGREEMENT WITH OVERALL EXACT METHOD OF DIVERSION/ISOLATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
13. PLACE SILT FENCE ON EITHER SIDE OF THE TRENCH AND HAUL ROAD THAT WILL BE CREATED IN ORDER TO PLACE THE STORM WATER PIPE. THE SILT FENCE SHOULD REMAIN IN PLACE UNTIL THE ENTIRE AREA WITHIN THE STREAMBANK IS STABILIZED.
14. THE CHANNEL BANK MUST BE SEEDED AND STABILIZED WITH AN APPROPRIATE EROSION CONTROL BLANKET PRIOR TO ACCEPTING FLOWS.
15. DURING WORK ON THE BANK OF NORTH SHORE CHANNEL, WORK MUST BE TIMED TO TAKE PLACE DURING LOW OR NO-FLOW CONDITIONS. ALSO, STREAM FLOW MUST BE ISOLATED FROM THE WORK AREA USING A NON-ERODIBLE (STEEL SHEETS, COFFERDAMS, AQUA BARRIERS, ETC.). ALSO, IF BYPASS IS NECESSARY, THE INLET OF THE HOSE SHALL BE PLACED AT A SUMP PIT AND THE OUTLET PLACED ON A NON-ERODIBLE, ENERGY DISSIPATING SURFACE PRIOR TO REJOINING THE STREAM FLOW.
16. THE END SECTION SHOULD INCLUDE A ROCK LINED APRON AND THEN THIS AREA IS TO BE IMMEDIATELY BROUGHT TO FINAL GRADE.
17. THE CONTRACTOR SHALL MAKE SURE THAT NO DEBRIS BE DROPPED INTO THE CHANNEL WHEN THE BRIDGE IS DEMOLISHED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED AND THE COST FOR THIS TASK WILL BE INCLUDED IN THE COST OF THE REMOVAL OF EXISTING STRUCTURES.
18. SEDIMENT CONTROL, SILT CURTAIN SHALL BE USED, LOCATIONS WILL VARY AS DIRECTED BY THE ENGINEER.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET EROSION AND SEDIMENT CONTROL DETAILS

SCALE: HORIZ. 1" = 50' DRAWN BY JSS

DATE: OCT. 17, 2007 CHECKED BY JP

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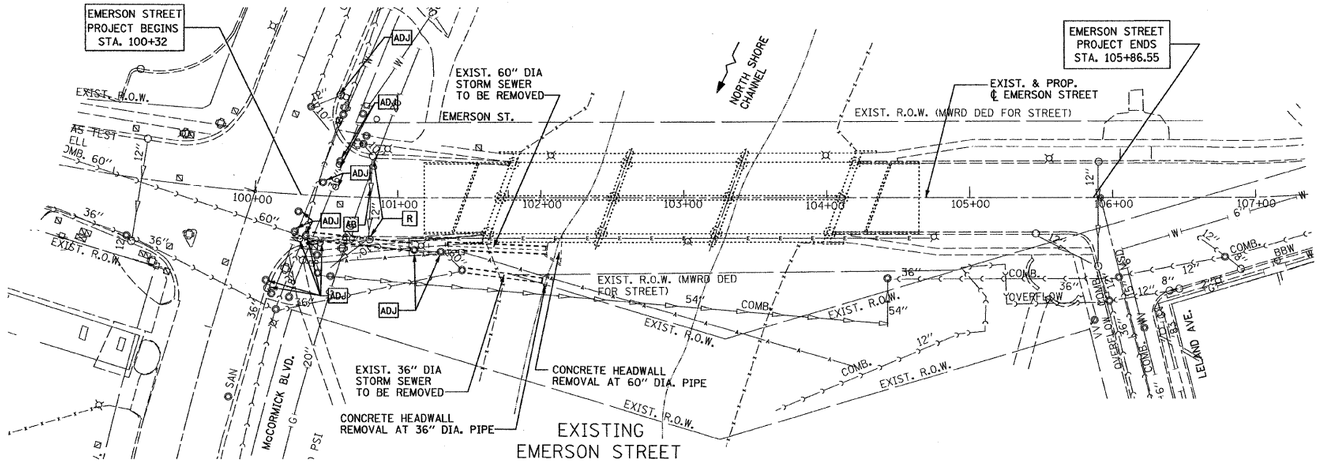
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98



NOTE:

SEE SHEET 3 OF 32 OF STRUCTURAL PLANS FOR ADDITIONAL DETAILS AT 60" Ø SEWER.

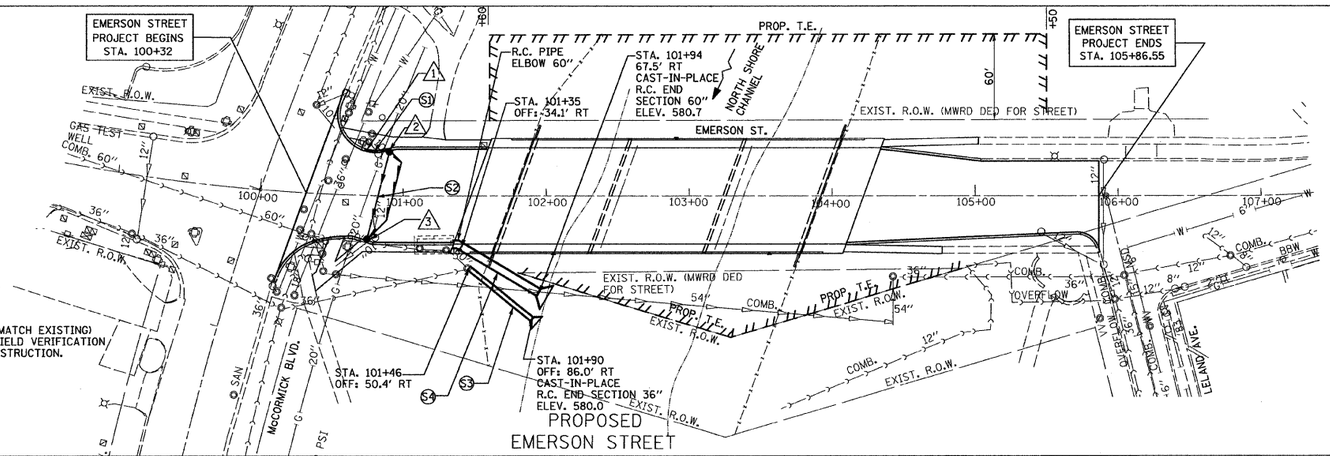
LEGEND:

- PROPOSED MANHOLE
- PROPOSED CATCH BASIN
- PROP. INLET
- PROPOSED STORM SEWER
- PROPOSED PIPE UNDERDRAINS FABRIC LINED TRENCH 4"
- PROPOSED FLARED END SECTION
- EXISTING MANHOLE
- EXISTING CATCH BASIN
- EXISTING INLET
- EXISTING FLARED END SECTION
- EXISTING STORM SEWER

1 STA. 100+75, 30.5' LT
INLET TYPE A, TYPE 23, F&G
RIM ELEV. = 599.33
INV. ELEV. = 597.15 (EAST)

2 STA. 100+90, 31.5' LT
CATCH BASIN, TYPE A, 4' DIA., TYPE 23, F&G
RIM ELEV. = 599.86
INV. ELEV. = 597.05 (WEST)
= 596.95 (SOUTH)

3 STA. 100+75, 31.4' RT
CATCH BASIN, TYPE A, 4' DIA., TYPE 23, F&G
RIM ELEV. = 599.28
INV. ELEV. = 596.31 (NORTH)
= 596.21* (SOUTH, MATCH EXISTING)
* SUBJECT TO FIELD VERIFICATION PRIOR TO CONSTRUCTION.



(S1) STORM SEWERS, CLASS A, TYPE 1, 12" @ 1.0%
L = 11 FT
TRENCH BACKFILL = 1.5 CU YD

(S2) STORM SEWERS, CLASS A, TYPE 1, 12" @ 1.0%
L = 64 FT
TRENCH BACKFILL = 8.5 CU YD

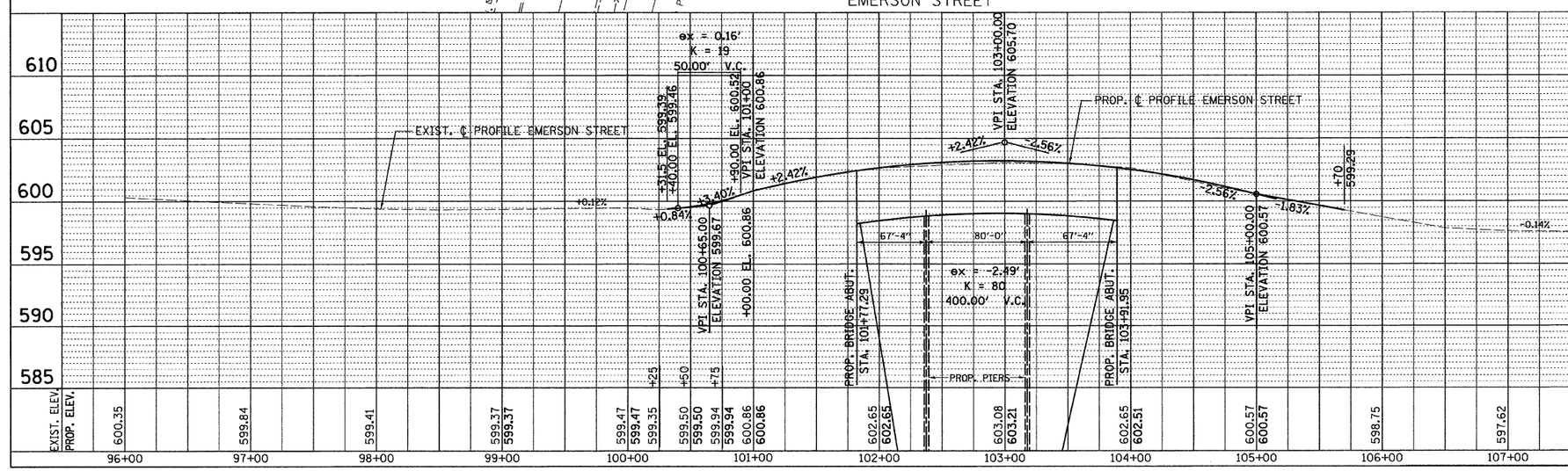
* (S3) STORM SEWERS, TYPE 4, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV, 36"
L = 57 FT

* (S4) STORM SEWERS, TYPE 4, REINFORCED CONCRETE CULVERT, STORM DRAIN, AND SEWER PIPE, CLASS IV, 60"
L = 68 FT

* ALL LABOR AND MATERIALS REQUIRED FOR THE CONNECTION OF THE PROPOSED STORM SEWER TO THE EXISTING STRUCTURE IS INCLUDED IN THE STORM SEWER PAY ITEM.

NOTE:

SEE SHEET 3 OF 32 OF STRUCTURAL PLANS FOR ADDITIONAL DETAILS AT 60" Ø SEWER.



REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
DRAINAGE AND UTILITIES

SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'
DATE OCT. 17, 2007

DRAWN BY JSS
CHECKED BY JJP

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10/17/2007
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PART OF THE NORTHWEST QUARTER OF SECTION 13, AND THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 41 NORTH, RANGE 13 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS.

F.A.U.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
1312	0707-B	COOK	80	15
STATION 101+07.13 TO STATION 106+86.55				
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60898

PARCEL NUMBER	OWNER	TOTAL HOLDING ACRES	PART TAKEN ACRES	REMAINDER ACRES	PREVIOUSLY DEDICATED ACRES	TEMPORARY EASEMENT ACRES	EASEMENT PURPOSE	PERMANENT TAX INDEX NUMBER	PROPERTY ACQUIRED BY
OGE0001TE-A	METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO	N/A				0.101		10-13-106-001	
OGE0001TE-B						0.002 98 SQ. FT.		10-14-205-016	
OGE0002TE-A						0.142		10-13-106-001 10-14-205-016	
OGE0002TE-B						0.238		10-13-106-001	

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT
- 129.32' MEASURED DIMENSION
- 129.32' (COMP) COMPUTED DIMENSION
- ( ) RECORDED DATA
- EXISTING BUILDING

N

30 0 30
GRAPHIC SCALE - FEET

BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD '83, EAST ZONE, ON THE CENTERLINE OF PROPOSED CONSTRUCTION OF EMERSON STREET OF S 75° 18' 39" E

- IRON PIPE OR ROD FOUND
- SET 5/8" x 30" REBAR
- + CUT CROSS FOUND OR SET
- PK● FOUND PK NAIL
- PK○ SET PK NAIL
- ● T1, T2, T3 THESE STAKES REFERENCE FOUND OR SET MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ■ STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- PERMANENT SURVEY MARKER, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- □ RIGHT OF WAY STAKING PROPOSED TO BE SET.

CURVE 3
Δ= 28° 03' 08"
D= 02° 44' 24"
R= 2,081.15'
L= 1,023.83'
T= 522.39'
E= 64.26'
PC STA 194+27.06
PI STA 199+49.45
PT STA 204+50.89

CURVE 1
Δ= 17° 21' 58"
D= 04° 25' 13"
R= 1,291.36'
L= 391.41'
T= 197.22'
E= 14.97'
PC STA 97+15.72
PI STA 99+12.94
PT STA 101+07.13

CURVE 2
Δ= 16° 28' 50"
D= 09° 11' 11"
R= 623.70'
L= 179.40'
T= 90.32'
E= 6.51'
PC STA 106+86.55
PT STA 108+65.95

McCORMICK BOULEVARD
CURVE 1 CENTERLINE OF PROPOSED CONSTRUCTION
EXISTING RIGHT OF WAY LINE
EAST LINE OF THE NORTHEAST QUARTER OF SECTION 14-41-13
PIN 10-14-205-016
PIN 10-13-106-001
STA 101+60.00 112.66' LT
S 75° 24' 54" E 113.36'
PROPOSED TEMPORARY EASEMENT LINE
PARCEL OGE0002 TE-A
4' CHAIN LINK FENCE
EDGE OF WATERWAY
STA 102+73.36 112.87' LT
5/8" REBAR WITH YELLOW "IDOT TIE" CAP
STA 100+68.58 51.95' LT
T1 T2 T3
N 14° 41' 21" E 59.34'
STA 100+00.00 EMERSON STREET = STA 200+00.00 McCORMICK BLVD.
PK
STA 101+60.00 52.72' LT
T1-75' 63.65' 68.82'
101+00
PT STA 101+07.13
SET CROSS OF PK NAILS
TOP OF BANK
N 75° 27' 04" W 92.95'
S 73° 30' 08" W 63.30'
POINT OF BEGINNING PARCEL OGE0002 TE-A STA 102+52.95 52.95' LT
NORTH SHORE CHANNEL
STA 103+90.53 113.08' LT
EDGE OF WATERWAY
N 40° 00' 10" E 86.23'
STA 103+62.31 53.22' LT
6' CHAIN LINK FENCE AT TOP OF BANK
S 75° 24' 54" E 159.47'
PROPOSED TEMPORARY EASEMENT LINE
PARCEL OGE0002 TE-B
PIN 10-13-106-001
STA 105+50.00 113.37' LT
S 14° 41' 21" W 59.70'
187.79'
N 75° 27' 04" W 411.22' TO P.O.B. OGE0001 TE-C
POINT OF BEGINNING PARCEL OGE0002 TE-B STA 105+50.00 53.37' LT
N 75° 27' 04" W 114.17'
POINT OF COMMENCEMENT PARCEL OGE0002 TE-A PARCEL OGE0002 TE-B NORTHERLY MOST CORNER OF LOT 27
S 45° 58' 18" W 30.00'
4" MSDGC SURVEY DISK STA 106+64.14 53.58' LT
FOUND IRON PIPE
(44.5') EXISTING ROW LINE DOCUMENT 23854942 (95.19')
LOT 26 LOT 25 LOT 24 LOT 23 LOT 22
McCORMICK PARK SUBDIVISION DOCUMENT 8462783
EXISTING ROW LINE DOCUMENT 23854942
FOUND IRON PIPE FOUND ROW MONUMENT
(75.74') NORTHWESTERLY LINE OF LOT 27
LOT 27
(78.4') (33') (33') (33') (33') (33')
POINT OF COMMENCEMENT PARCEL OGE0001 TE-A PARCEL OGE0001 TE-B SOUTHWEST CORNER OF LOT 27
107+00
PC STA 106+86.55 SET CROSS OF PK NAILS
CURVE 2
108+00
PT STA 108+65.95
PI STA 107+76.88
110+00
N 88° 12' 31" E
(66')
EMERSON STREET
71.67' 56.51' 68.00'
CUT 'X' ON CONCRETE SIDEWALK
T1 T2 T3
41' 40'
(31.5') (30') (30') (30') (30') (30') (30') (2') (31.5')
FOUND IRON PIPE
LOT 2 LOT 1
LEMAR AVENUE
LOT 9
ARTHUR T. McINTOSH'S CHURCH STREET ADDITION
LOT 8 LOT 7 LOT 6 LOT 5 LOT 4 LOT 3
EXISTING RIGHT OF WAY LINE
LELAND AVENUE
(30') (30')

CENTERLINE OF EMERSON STREET USED IN DEDICATION DOCUMENT 18170949
STA 100+30.04 80.43' RT
EXISTING RIGHT OF WAY LINE
TOP OF BANK
4' CHAIN LINK FENCE
STA 101+80.30 53.80' RT
PARCEL OGE0001 TE-B
STA 102+06.81 53.55' RT
S 34° 30' 30" W 7.92'
26.51' 24.89'
POINT OF BEGINNING PARCEL OGE0001 TE-B STA 102+04.13 61.00' RT
EXISTING RIGHT OF WAY LINE
S 75° 51' 15" E
PIN 10-14-205-016
N 58° 29' 35" W 130.42'
N 34° 30' 17" E 42.14'
22.76'
RELOCATED EMERSON STREET
DEDICATED FOR PUBLIC STREET BY DOCUMENT NUMBER 18170949 RECORDED MAY 24, 1961
103+00 PK
104+00 PK
CENTERLINE OF PROPOSED CONSTRUCTION S 75° 18' 39" E
105+00 PK
STA 103+21.36 52.46' RT
PROPOSED TEMPORARY EASEMENT LINE
S 75° 51' 15" E 169.70'
PARCEL OGE0001 TE-A
PIN 10-13-106-001
S 88° 10' 29" W 168.43'
POINT OF BEGINNING PARCEL OGE0001 TE-A STA 104+90.45 50.86' RT
S 88° 10' 29" W 140.00'
106+00 PK
S 88° 10' 29" W 308.43'
STA 103+07.18 92.15' RT
STA 103+28.97 98.73' RT
EXISTING RIGHT OF WAY LINE
ORIGINAL EMERSON STREET
NORTH SHORE CHANNEL
EDGE OF WATERWAY
CENTERLINE OF EXISTING RIGHT OF WAY
(33')
STA 105+84.16 91.91' RT FOUND IRON PIPE
SOUTH LINE OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 14-41-13
6' CHAIN LINK FENCE AT TOP OF BANK
WEST LINE OF THE NORTHWEST QUARTER OF SECTION 13-41-13

FOUND IRON PIPE
(44.5') EXISTING ROW LINE DOCUMENT 23854942 (95.19')

STATE OF ILLINOIS } S.S.
COUNTY OF COOK }

THIS IS TO CERTIFY THAT I, WILLIAM J. FLEMING, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTIONS 13 AND 14, TOWNSHIP 41 NORTH, RANGE 13 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY; THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF; THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY; THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

DATED AT CHICAGO, ILLINOIS THIS 6TH DAY OF SEPTEMBER, A.D. 2007.

ILLINOIS PROFESSIONAL LAND SURVEYOR 35-3226
EXPIRES 11/30/2008

STATE OF ILLINOIS
WILLIAM J. FLEMING
35-3226
PROFESSIONAL LAND SURVEYOR

GROUND COORDINATES ON THE CROSS OF PK NAILS SET AT PT STATION 101+07.13 HAVE A VALUE OF 1,962,311.906 NORTH - 1,153,857.436 EAST AND ARE BASED ON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, NAD '83, EAST ZONE COMBINED SCALE FACTOR = 0.9999 8419

STATION	OFFSET	NORTH	EAST
101+07.13	0.00' RT	1,962,165.513	1,154,215.328
101+60.00	52.72' LT	1,962,298.499	1,153,908.578
101+60.00	112.66' LT	1,962,298.499	1,153,908.578
101+80.30	53.80' RT	1,962,293.351	1,153,928.218
102+04.13	61.00' RT	1,962,287.310	1,153,951.263
102+06.81	53.55' RT	1,962,286.629	1,153,953.860
102+52.95	52.95' LT	1,962,274.931	1,153,998.486
102+73.36	112.87' LT	1,962,269.754	1,154,018.234
103+07.18	92.15' RT	1,962,261.177	1,154,050.952
103+21.36	52.46' RT	1,962,257.584	1,154,064.659
103+28.97	98.73' RT	1,962,255.653	1,154,072.024
103+62.21	53.22' LT	1,962,247.223	1,154,104.183
103+90.53	113.08' LT	1,962,240.043	1,154,131.574
104+90.45	50.86' RT	1,962,214.707	1,154,228.224
105+50.00	53.68' LT	1,962,199.605	1,154,285.831
105+50.00	113.37' LT	1,962,199.605	1,154,285.831
106+86.55	0.00' RT	1,962,164.977	1,154,417.923

RECEIVED
SEP 06 2007
PLATS & LEGALS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & LAND SURVEYORS
8501 W. Higgins Road Suite 280
Chicago, Illinois 60631
(773) 399-0112
PTB 138/001
WORK ORDER 13

REVISION	
DATE	DESCRIPTION

PLAT OF HIGHWAYS
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
EMERSON STREET
OVER THE NORTH SHORE CHANNEL

SECTION	COOK COUNTY
PROJECT	JOB NO. R-90-006-07
STATION 101+07.13 TO	STATION 106+86.55
SCALE: 1" = 30'	SHEET 2 OF 2

BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

DATE	BY	
		MADE
		CHECKED
		PLOTTED
T.O.W.	PLAT	BOOK *

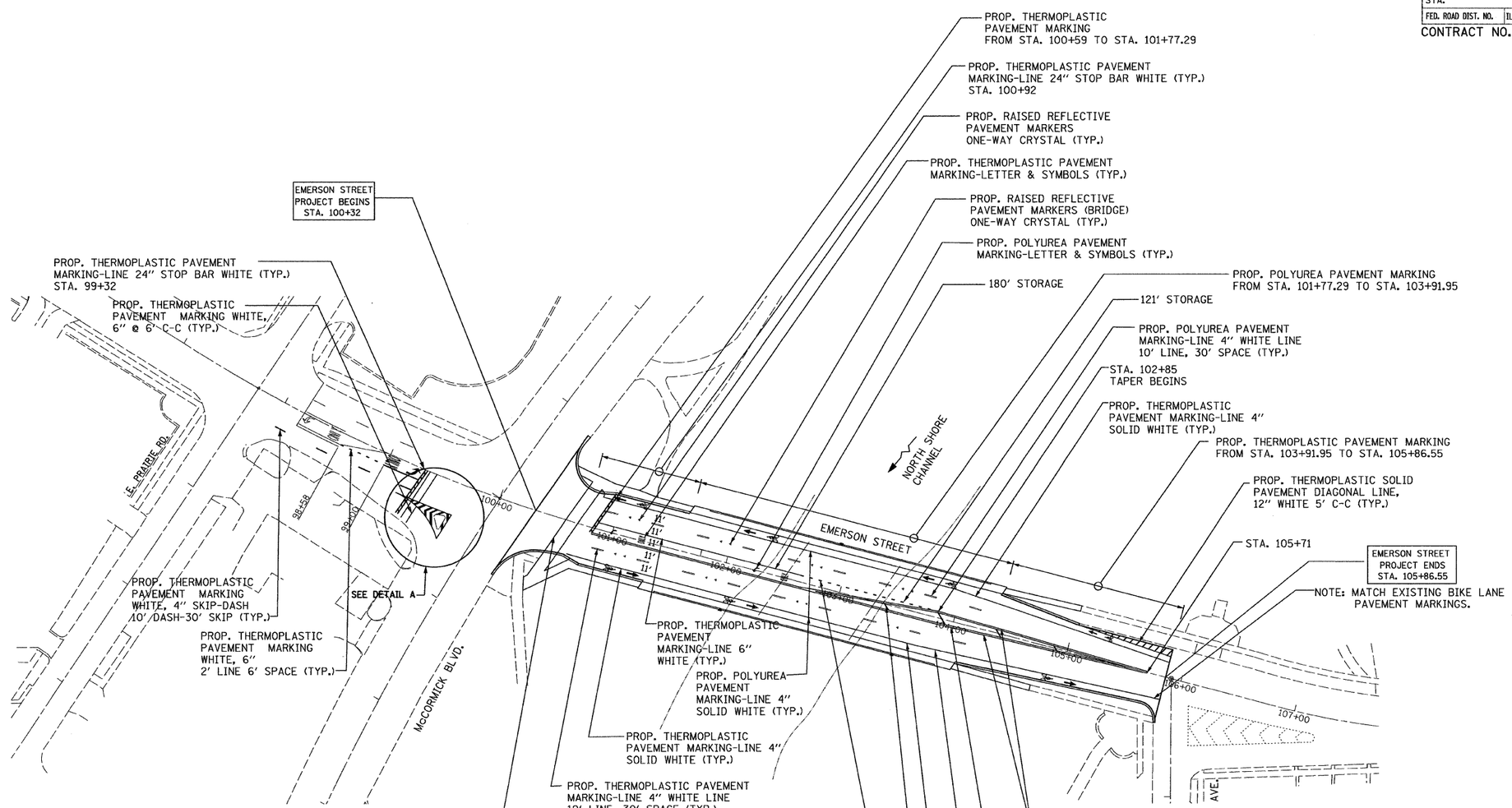
SHEET 1 OF IS COVER SHEET AND IS NOT RECORDED

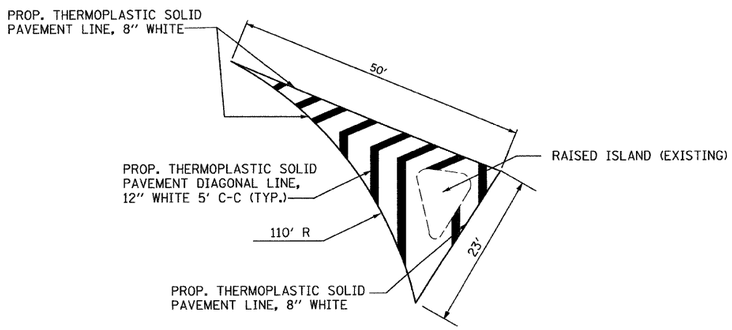
RECORDING: RECORDED ON

AS DOCUMENT NO.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98





DETAIL A

(NOT TO SCALE)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
PAVEMENT MARKING PLAN

SCALE: HORIZ. 1" = 50'

DATE: OCT. 17, 2007

DRAWN BY JSS

CHECKED BY JP

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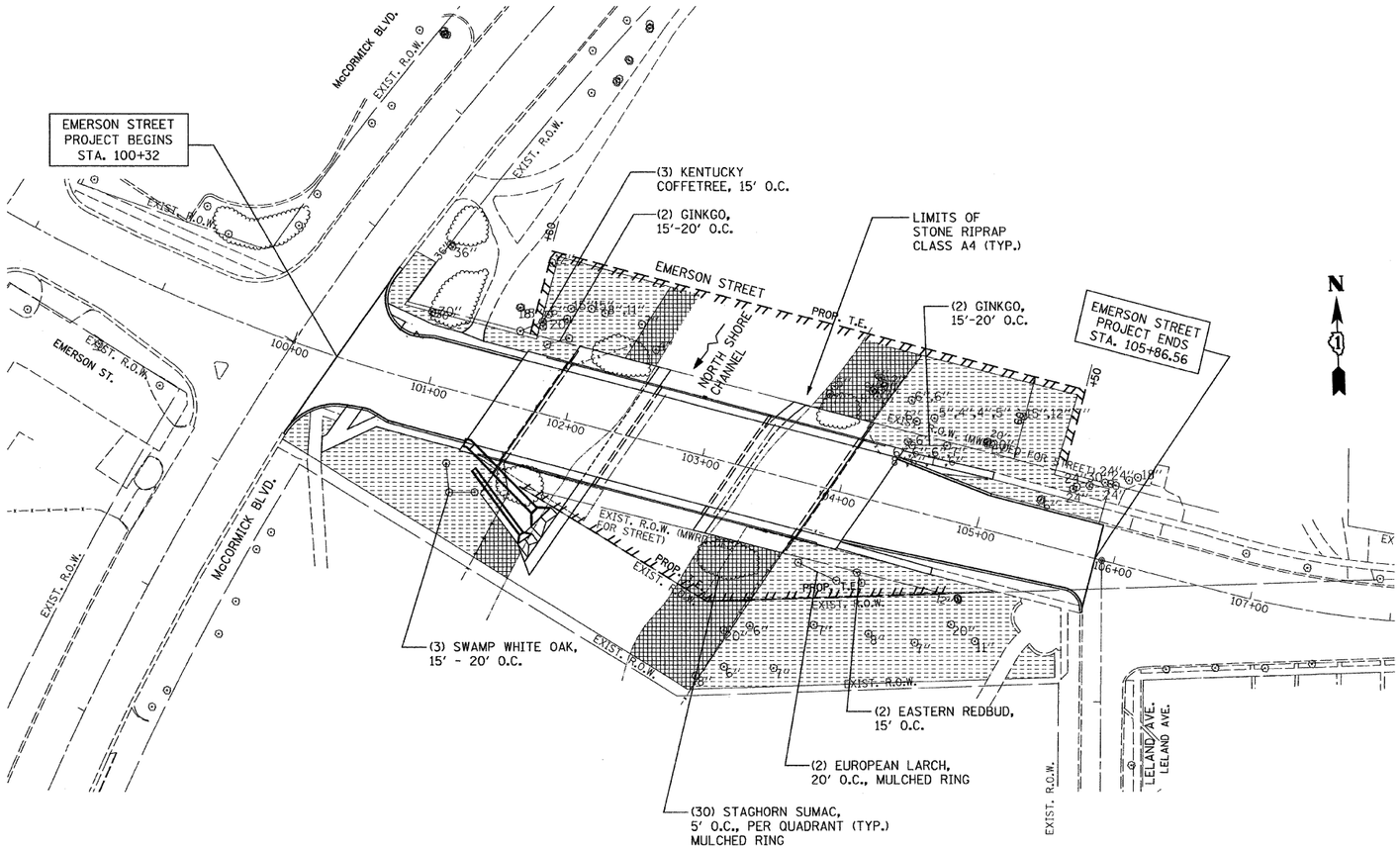
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

LEGEND

- SODDING, SALT TOLERANT
- SEEDING, CLASS 3
- LIMITS OF CONSTRUCTION



LANDSCAPING GENERAL PLAN NOTES

1. THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS WHICH WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.
3. LAYOUT OF LANDSCAPED AREAS WILL REQUIRE APPROVAL OF THE ENGINEER PRIOR TO TOPSOIL PLACEMENT, SEEDING, AND PLANTING.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET LANDSCAPING PLAN

SCALE: HORIZ. 1" = 50' DRAWN BY JSS
DATE: OCT. 17, 2007 CHECKED BY JP

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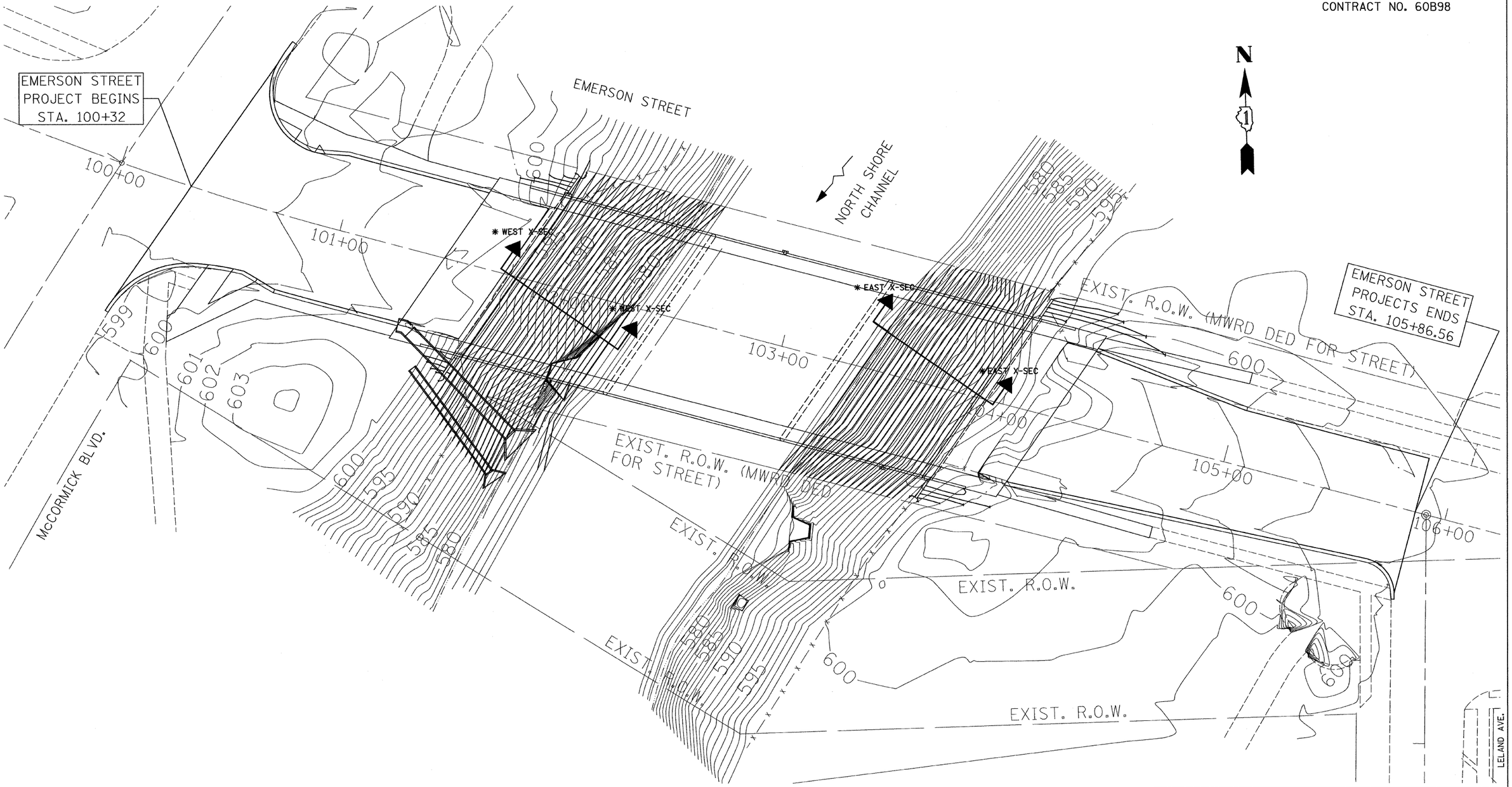
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	18
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98



* SEE CROSS-SECTION SHEET 80 FOR EAST X-SECT 1 & WEST X-SECT 1

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.U. ROUTE 1312 (EMERSON STREET)

EMERSON STREET
GRADING PLAN

SCALE: HORIZ. 1" = 20'
DRAWN BY JSS
DATE: OCT. 17, 2007
CHECKED BY JP

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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	19

CONTRACT NO. 60B98

EXISTING TRAFFIC SIGNAL LEGEND

	EXISTING	EXISTING TO BE REMOVED
CONTROLLER CABINET	⊠	"E" ⊠
RAILROAD CONTROL CABINET	R⊠R	
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	P	"E"
TELEPHONE CONNECTION		
SIGNAL HEAD		"E"
SIGNAL HEAD WITH BACKPLATE		"E"
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"E" "P"
SIGNAL HEAD PEDESTRIAN		"E"
ILLUMINATED SIGN "NO LEFT TURN"		
ILLUMINATED SIGN "NO RIGHT TURN"		
SIGNAL POST		"E"
WOOD POLE		
STEEL MAST ARM ASSEMBLEY AND POLE		"E"
ALUMINUM MAST ARM ASSEMBLY AND POLE		

	EXISTING	EXISTING TO BE REMOVED
STEEL COMBINATION MAST ARM ASSEMBLEY AND POLE WITH LUMINAIRE		
JUNCTION BOX	J	
HANDHOLE		"E"
HEAVY DUTY HANDHOLE	H	"E" H
DOUBLE HANDHOLE		"E"
G.S. CONDUIT IN TRENCH OR PUSHED		
COMMON TRENCH		
UNIT DUCT		
PEDESTRIAN PUSHBUTTON DETECTOR		"E"
DETECTOR LOOP, TYPE I		"E"
PREFORMED DETECTOR LOOP		
MICROWAVE VEHICLE SENSOR	M	
VIDEO DETECTOR	V	
CLOSED CIRCUT TV	C	
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		

FILE NAME = c:\projects\traffic\t072028\emerson.dgn	USER NAME = kenthaphixaybo	DESIGNED - BCK	REVISED -
		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 12/2/2007	DATE - 10/2/2007	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING TRAFFIC SIGNAL/REMOVAL PLAN
EMERSON AT E. PRAIRIE RD. AND McCORMICK BLVD.

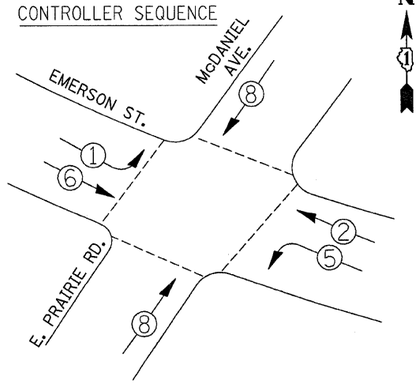
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	19
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	20

CONTRACT NO. 60B98

CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

N

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

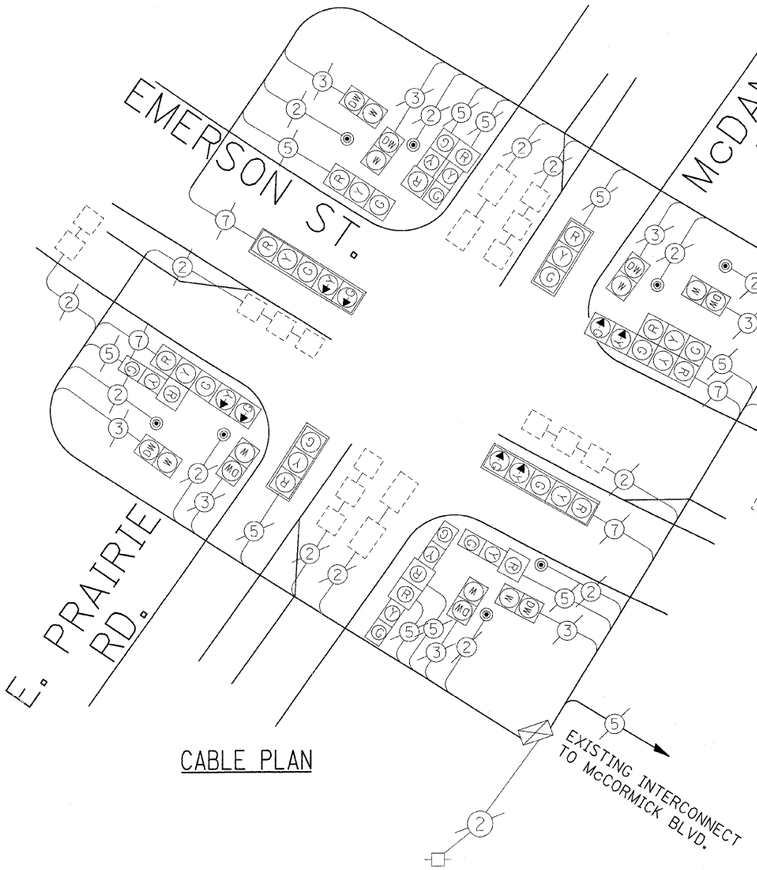
CABLE PLAN LEGEND

EXISTING

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- (1) GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)

EXISTING

- SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
- C GROUND ROD AT HANDHOLE(H), DOUBLE HANDHOLE(H), OR CONTROLLER(C)
- P GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- (2) DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOOP DETECTOR CABLE TO BE SHIELDED.
- (24) FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F



CABLE PLAN

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET (COMPLETE)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE OF THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR BID PRICE.

2 EACH SIGNAL HEAD, 1 FACE, 3 SECTION M.A. MTD.
2 EACH SIGNAL HEAD, 1 FACE, 5 SECTION M.A. MTD
2 EACH SIGNAL HEAD, 1 FACE, 3 SECTION BRKT. MTD
2 EACH SIGNAL HEAD, 2 FACE, 3 SECTION BRKT. MTD
2 EACH SIGNAL HEAD, 2 FACE, 1-3,1-5 SECT BRKT. MTD
8 EACH PEDESTRIAN SIGNAL HEADS
8 EACH PUSH-BUTTONS

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	135	17	0.50	119.00
(YELLOW)	14	135	25	0.25	87.50
(GREEN)	14	135	15	0.25	52.50
ARROW	8	135	12	0.10	9.60
PED. SIGNAL	8	90	25	1.00	200.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	568.60

ENERGY SUPPLY
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096
CONTACT: LARRY D. SHANK
PHONE: (847) 291-3214
COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/2/2007	DATE - 10/2/2007	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING CABLE PLAN
EMERSON AT E. PRAIRIE RD.

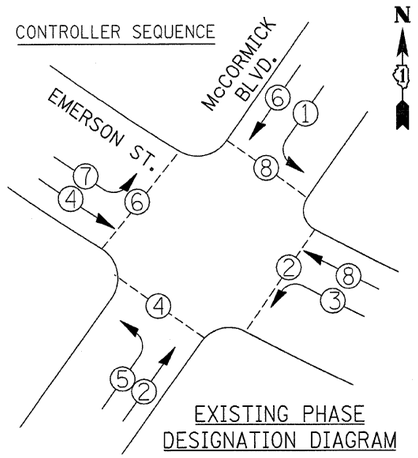
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	20
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	21

CONTRACT NO. 60B98

CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

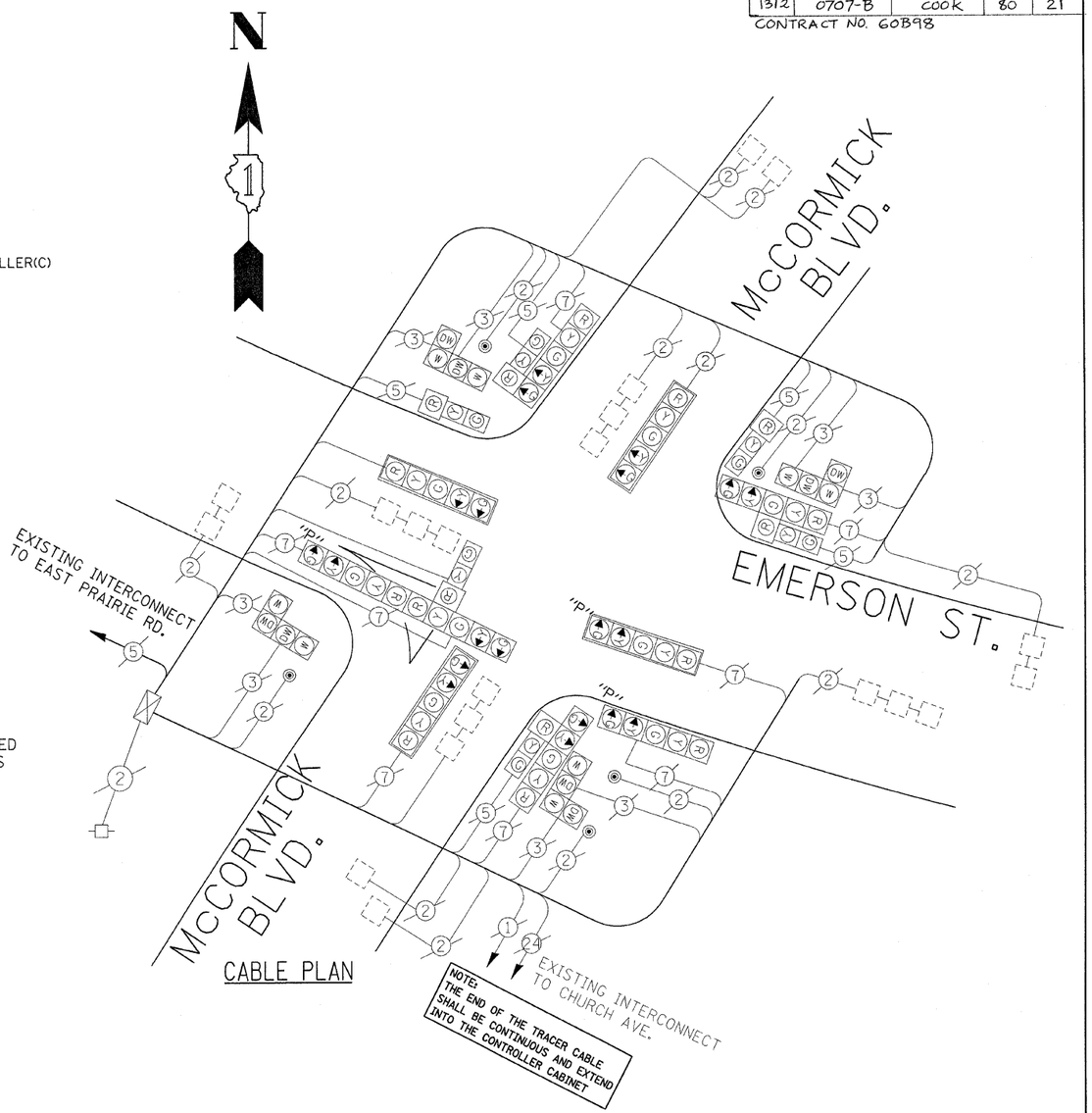
CABLE PLAN LEGEND

EXISTING

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- (1) GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)

EXISTING

- SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
- C GROUND ROD AT HANDHOLE(H), DOUBLE HANDHOLE(H), OR CONTROLLER(C)
- P GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- S GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- VEHICLE DETECTOR, INDUCTION LOOP
- (2) DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOOP DETECTOR CABLE TO BE SHIELDED.
- (24) FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F



CABLE PLAN

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER AND CABINET (COMPLETE)

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE OF THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACTOR BID PRICE.

4 EACH SIGNAL HEAD, 5-SECTION MAST ARM MNTED.
3 EACH SIGNAL HEAD, 2 FACE, 3-SECT., 5-SECT.
2 EACH SIGNAL HEAD, 5-SECT. BRKT. MOUNT
2 EACH SIGNAL HEAD, 3-SECT. BRKT. MOUNT
1 EACH SIGNAL HEAD, 3 FACE
4 EACH SIGNAL POSTS
4 EACH 2-FACE, PEDESTRIAN SIGNAL HEADS
4 EACH PUSH-BUTTONS
4 EACH BACKPLATE
1 EACH SERVICE INSTALLATION

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136.00
(YELLOW)	16	135	25	0.25	100.00
(GREEN)	16	135	15	0.25	60.00
ARROW	20	135	12	0.10	24.00
PED. SIGNAL	8	90	25	1.00	200.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	620.00

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096
ENERGY SUPPLY CONTACT: LARRY D. SHANK
PHONE: (847) 291-3214
COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING CABLE PLAN
EMERSON AT McCORMICK BLVD.

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	21
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	22

CONTRACT NO. 60B98

CONSTRUCTION NOTE:

WEST BOUND PHASING SHALL BE TURNED OFF DURING CONSTRUCTION OF BRIDGE CLOSURE.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET		
RAILROAD CONTROL CABINET		
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	P	P
TELEPHONE CONNECTION	T	T
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
SIGNAL HEAD PEDESTRIAN		
ILLUMINATED SIGN "NO LEFT TURN"		
ILLUMINATED SIGN "NO RIGHT TURN"		
SIGNAL POST		
WOOD POLE		
STEEL MAST ARM ASSEMBLEY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLEY AND POLE WITH LUMINAIRE		
UNINTERRUPTIBLE POWER SUPPLY	UPS	

N

EMERSON ST.

EXIST. R.O.W.

McDANIEL AVE.

EXIST. R.O.W.

53'-E-3"
12'-E-2"
REPLACE EXIST POST WITH NEW 14' POST RE-USING EXISTING FOUNDATION (TYP.)
26'-E-2½"
24' MA
22' MA
18'-E-3"
33'-E-3"
20'-E-2½"
16' POST
4'-E-2"
3'-CT(2)1"
42'-E-1¼"
40'-E-2"
12'-E-2"
10+00
40'-E-4"
93'-E-1¼"
32'-E-4"
11'-E-2½"
41'-E-3"
144'-E-1¼"
EXIST. R.O.W.
16' POST
32'-E-3½"
10'-E-2"
8'-E-2½"
53'-E-3"
24'-E-4"
REPLACE EXIST POST WITH NEW 18' POST RE-USING EXISTING FOUNDATION (TYP.)
35'-E-2½"
22' MA
33'-E-4"
4'-E-2½"
4'-CT(2)4"
14' POST
EXIST. INTERCONNECT TO EACH OTHER.
21'-E-2"
5'-CT(3)4"
76'-E-1½"
65'-E-4"
18' POST
14'-E-1½"
49'-E-6"
45'-E-3½"
5'-CT(2) 1"
McCORMICK BLVD.
EXIST. R.O.W.
33'-E-3"
13'-E-2½"
16'-E-2½"
18' POST
90'-E-1¼"
EXIST. R.O.W.
200+00
100+00
Bridge Over North Shore Channel
E. PRAIRIE RD.
EXIST. R.O.W.
EXIST. R.O.W.
McCORMICK BLVD.
20'-E-2"
19'-E-2½"
38'-E-2"
62'-E-3"
170'-E-1¼"
EXIST. R.O.W.
REPLACE EXIST POST WITH NEW 16' POST RE-USING EXISTING FOUNDATION (TYP.)

TRAFFIC SIGNAL LEGEND

JUNCTION BOX	J	J
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED	------	
COMMON TRENCH	CT	
UNIT DUCT	UD	
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP		
MICROWAVE VEHICLE SENSOR	M	M
VIDEO DETECTOR	V	V
CLOSED CIRCUT TV	C	C
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		

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	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
EMERSON AT E. PRAIRIE RD. AND McCORMICK BLVD.

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

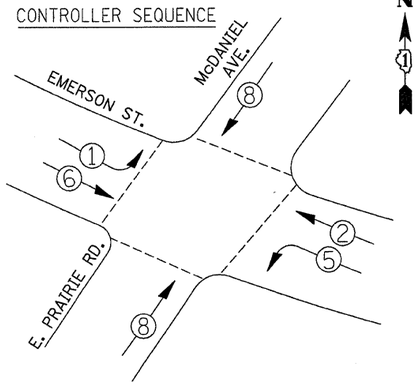
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	22
			CONTRACT NO. 60B98	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	23

CONTRA CT NO. 60B98

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

N

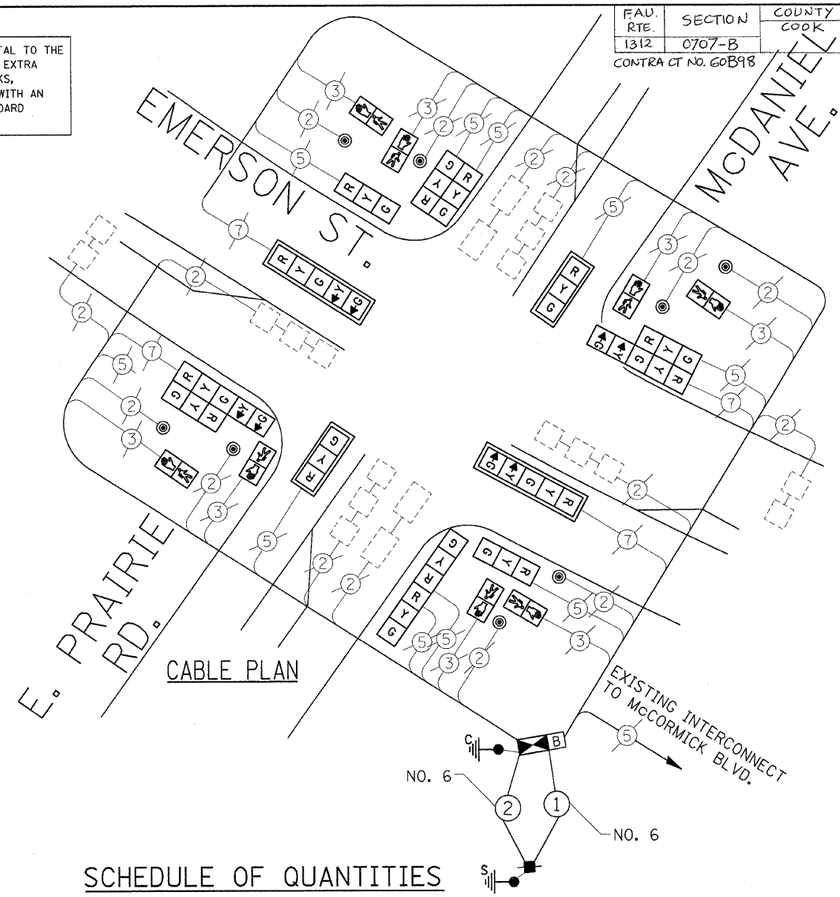
LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	G	8" (200mm) TRAFFIC SIGNAL SECTION
	R	12" (300mm) TRAFFIC SIGNAL SECTION
	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOOP DETECTOR CABLE TO BE SHIELDED.

EXISTING	PROPOSED	
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
C	C	GROUND ROD AT HANDHOLE(H), DOUBLE HANDHOLE(H), OR CONTROLLER(C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
	B	UNINTERRUPTABLE POWER SUPPLY



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	89.5
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	111
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18FT.	EACH	1
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, MAST ARM MNTD.	EACH	2
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM MNTD.	EACH	2
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRKT. MNTD.	EACH	1
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, BRKT. MNTD.	EACH	2
SIGNAL HEAD, L.E.D. 2-FACE, 3 SECTION, BRKT. MNTD.	EACH	1
SIGNAL HEAD, L.E.D. 2-FACE, 1-3, 1-5 SECT. BRKT. MNTD.	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRKT. MTD.	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
SERVICE INSTALLATION, POLE MOUNT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

I.D.O.T
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	135	17	0.50	119.00
(YELLOW)	14	135	25	0.25	87.50
(GREEN)	14	135	15	0.25	52.50
ARROW	8	135	12	0.10	9.60
PED. SIGNAL	8	90	25	1.00	200.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 568.60

ENERGY SUPPLY
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096
CONTACT: LARRY D. SHANK
PHONE: (847) 291-3214
COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT.	(m)
TYPE A - POST	4	(1.2)
D - CONTROLLER	4	(1.2)
E - M. ARM POLE		
24" (600mm)	10	(3.0)
30" (750mm)	15	(4.6)
36" (900mm)	15	(4.6)

CABLE SLACK	FT.	(m)
HANDHOLE	6.5	(2.0)
DOUBLE HANDHOLE	13	(4.0)
SIGNAL POST	2	(1.0)
CONTROLLER CAB.	1	(0.5)
FIBER OPTIC	13	(4.0)
ELECTRIC SERVICE	1	(0.5)
GROUND CABLE	1	(0.5)

VERTICAL	FT.	(m)
ALL FOUNDATIONS	3.5	(1.0)
MAST ARM (L) POLE	20'+L-2=	(6m+L-0.6m)=
BRACKET MOUNTED	13	(4.0)
PED. PUSHBUTTON	4	(1.2)
ELECTRIC SERVICE	13.5	(4.1)
SERVICE TO GROUND	13.5	(4.1)
POST MOUNTED	6	(1.8)

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		DRAWN -	REVISED -
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	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM
EMERSON AT E. PRAIRIE RD/McDANIEL AV.

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

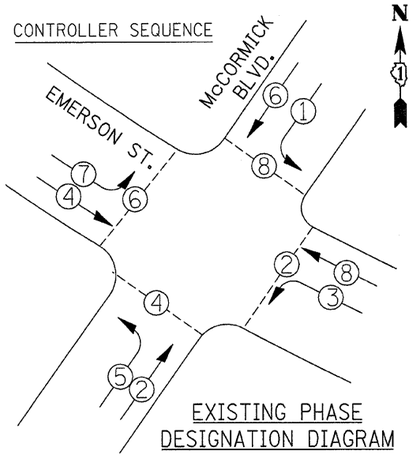
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	23
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	24

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

CONTRACT NO. 60B98

CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
2	2	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOOP DETECTOR CABLE TO BE SHIELDED.

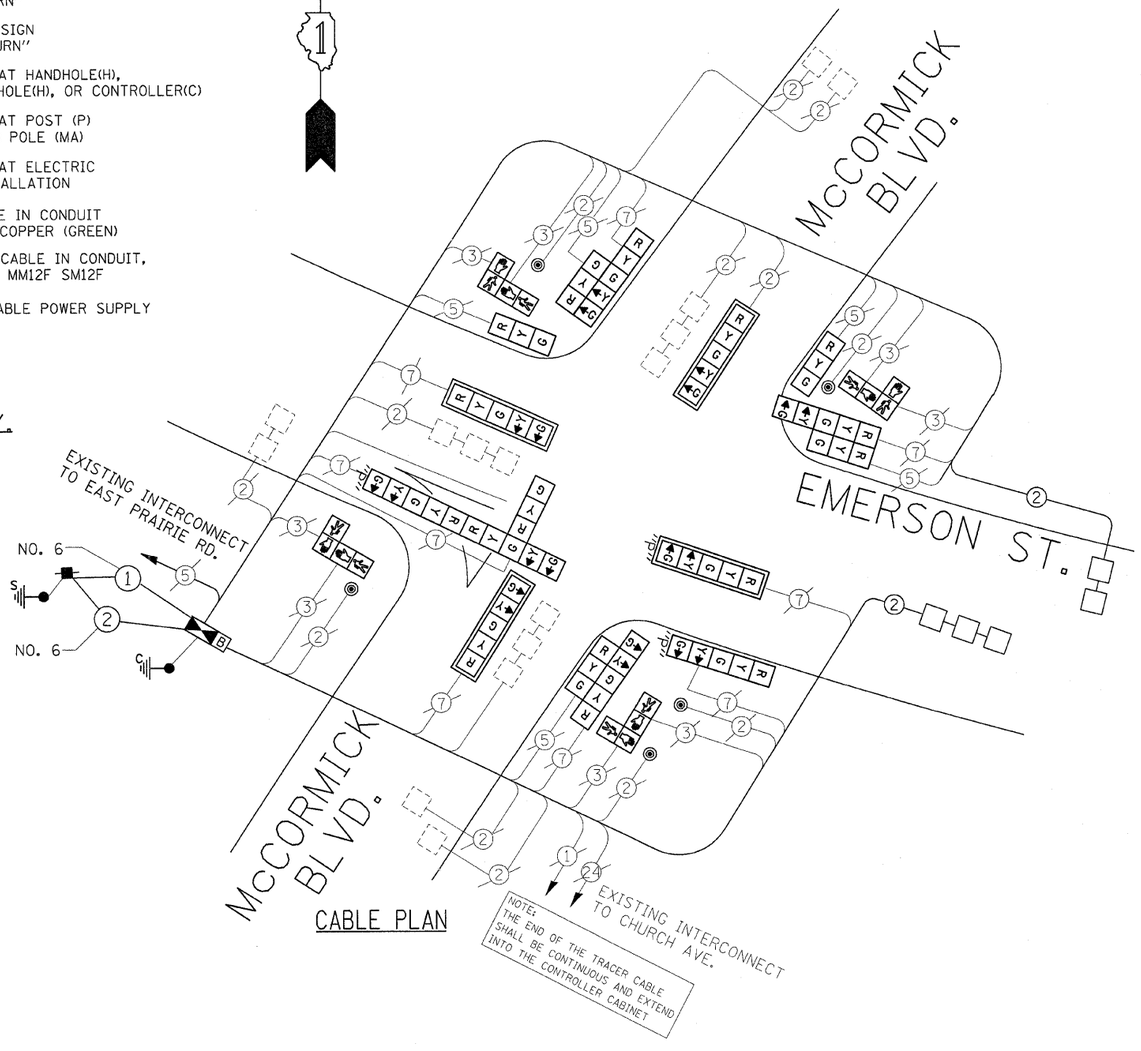
EXISTING	PROPOSED	
R Y G "P"	R Y G Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
C	C	GROUND ROD AT HANDHOLE(H), DOUBLE HANDHOLE(H), OR CONTROLLER(C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
1	1	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
24	24	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
	B	UNINTERRUPTABLE POWER SUPPLY

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OL — OVERLAP
- PEDESTRIAN PHASE
- * — NUMBER REFERS TO ASSOCIATED PHASE

CONSTRUCTION NOTE:

WEST BOUND PHASING SHALL BE TURNED OFF DURING CONSTRUCTION OF BRIDGE CLOSURE.



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
HEAVY-DUTY HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1PAIR	FOOT	627
ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6 1C	FOOT	27.5
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	50
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18FT.	EACH	2
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, MAST ARM MNTD.	EACH	4
SIGNAL HEAD, L.E.D. 1-FACE, 5 SECTION, BRACKET MNTD.	EACH	1
SIGNAL HEAD, L.E.D. 1-FACE, 3 SECTION, BRACKET MNTD.	EACH	2
SIGNAL HEAD, L.E.D. 2-FACE, 1-5, 1-3 SECT. BRACKET MNTD.	EACH	3
SIGNAL HEAD, L.E.D. 3-FACE, 2-5, 1-3 SECT. BRACKET MNTD.	EACH	1
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRKT. MTD.	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	4
DETECTOR LOOP, TYPE 1	FOOT	170
INDUCTIVE LOOP DETECTOR	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
SERVICE INSTALLATION, POLE MOUNT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	16	135	17	0.50	136.00
(YELLOW)	16	135	25	0.25	100.00
(GREEN)	16	135	15	0.25	60.00
ARROW	20	135	12	0.10	24.00
PED. SIGNAL	8	90	25	1.00	200.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	620.00

ENERGY SUPPLY
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096
CONTACT: LARRY D. SHANK
PHONE: (847) 291-3214
COMPANY: COM. EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)		(6m+L-0.6m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

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	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED CABLE PLAN, SCHEDULE OF QUANTITIES AND PHASE DESIGNATION DIAGRAM
EMERSON AT McCORMICK BLVD.

SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	24
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 60B98	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	25

CONTRACT NO. 60B98

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

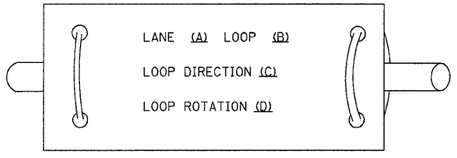
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

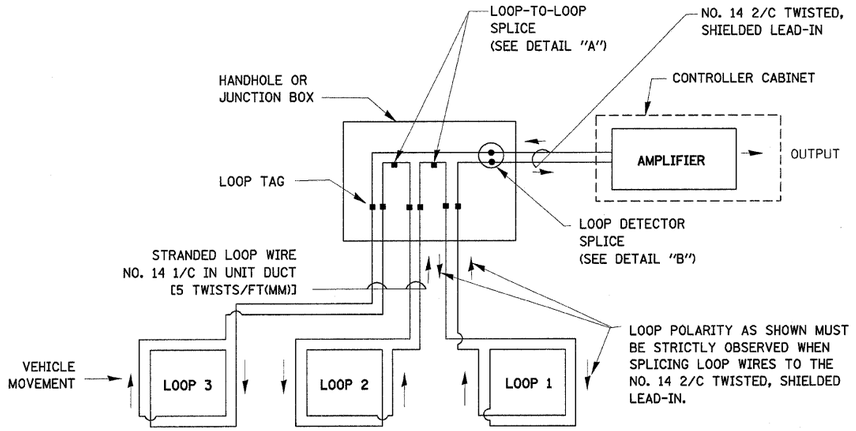


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

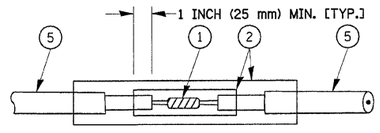
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

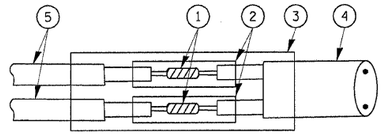


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

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	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

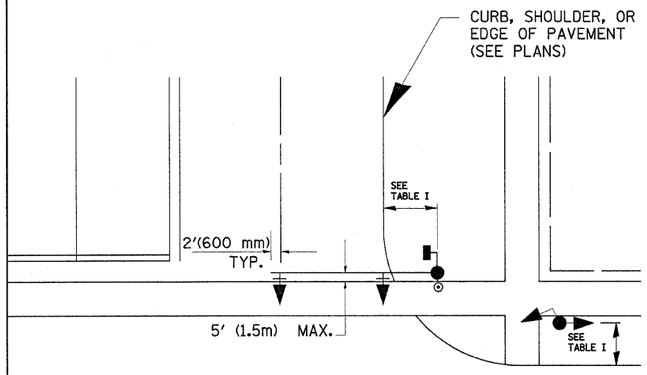
F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	25
			CONTRACT NO. 60B98	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FAU. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	26

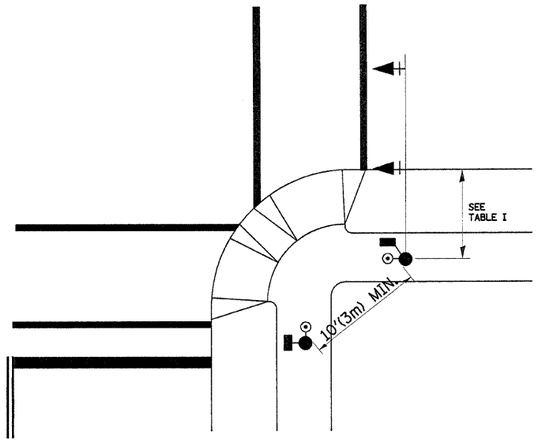
CONTRACT NO. 60B98

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION. EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

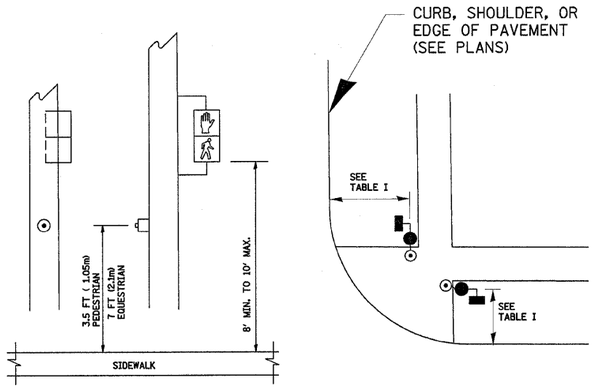


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

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	PLOT DATE = 10/2/2007	DATE -	REVISED -

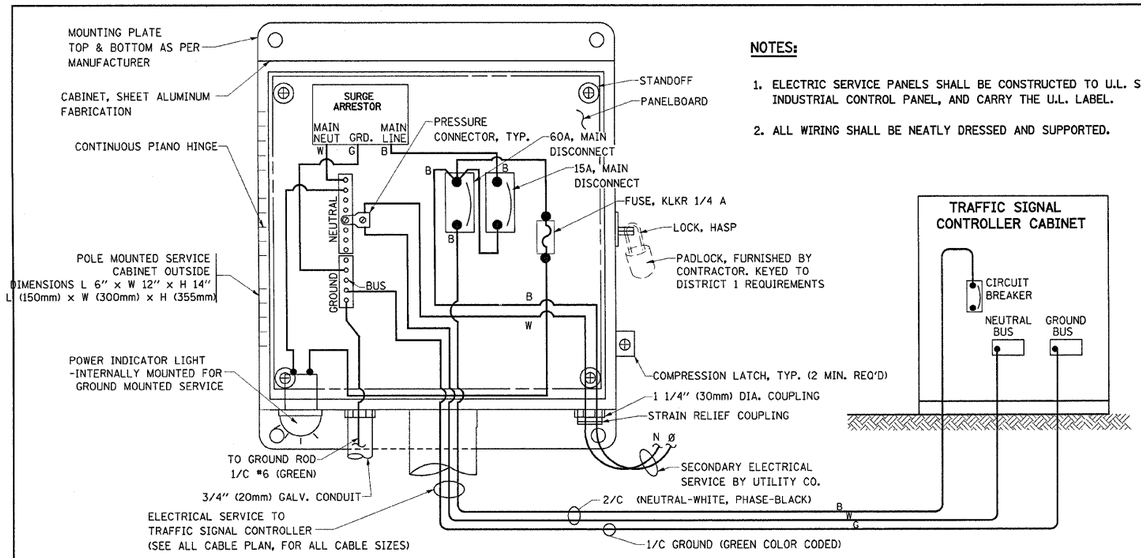
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	26
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	27
	CONTRACT NO. 60B98			

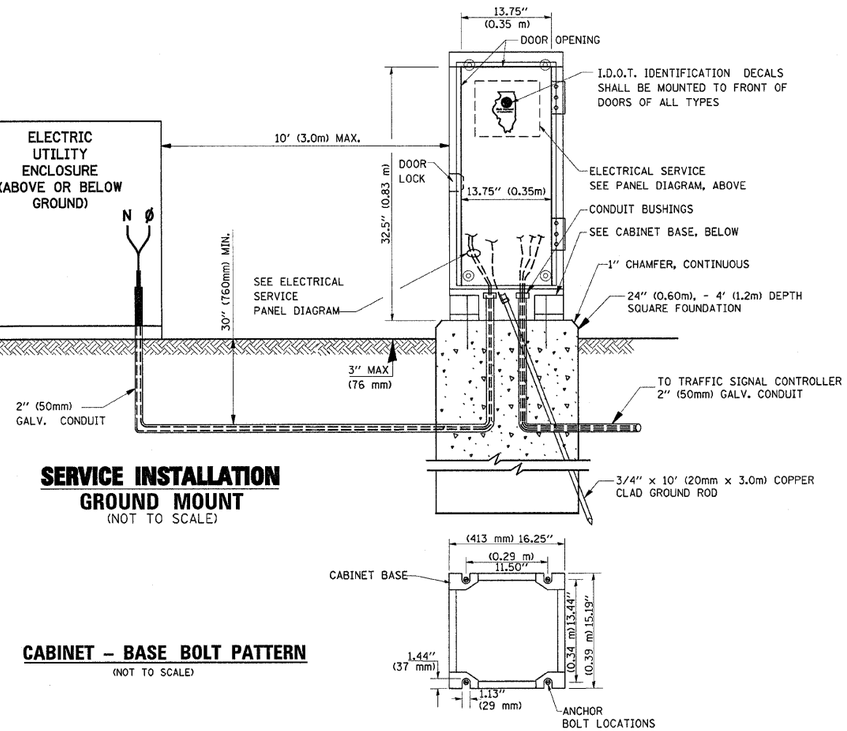


NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

(NOT TO SCALE)

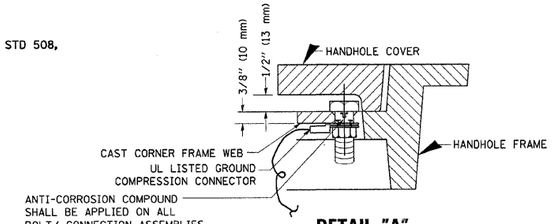


SERVICE INSTALLATION GROUND MOUNT

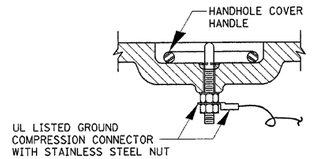
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"

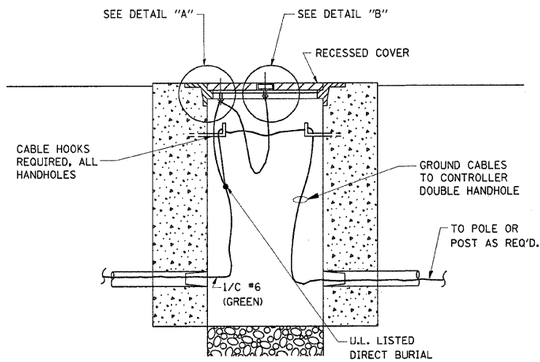


DETAIL "B"

NOTES:

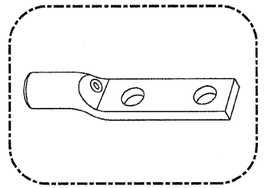
GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC,). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

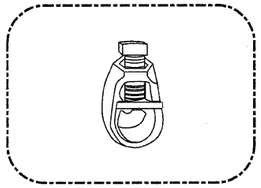


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



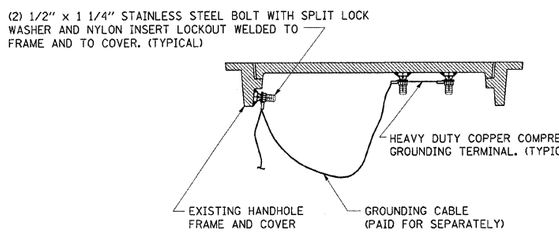
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

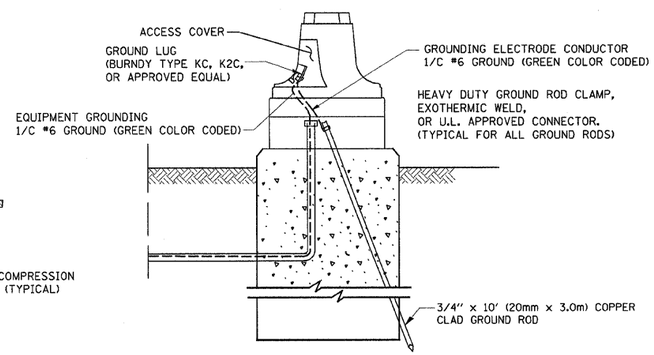
NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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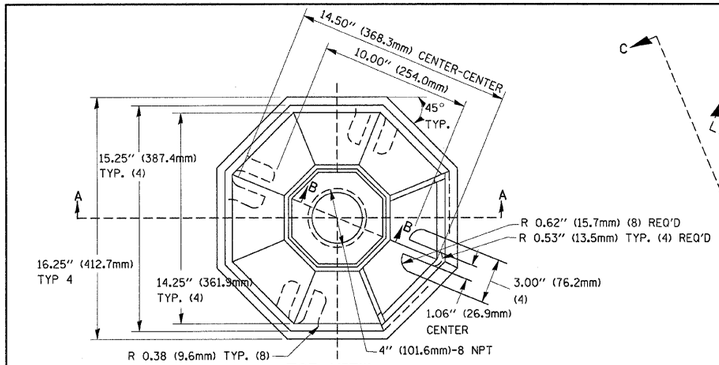
	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

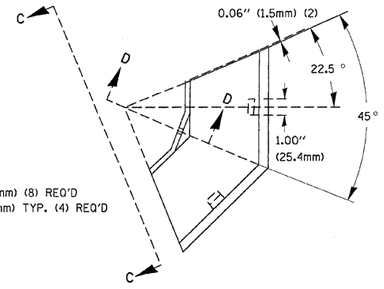
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

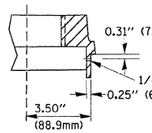
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	27
		CONTRACT NO. 60B98		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

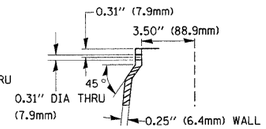


TOP VIEW

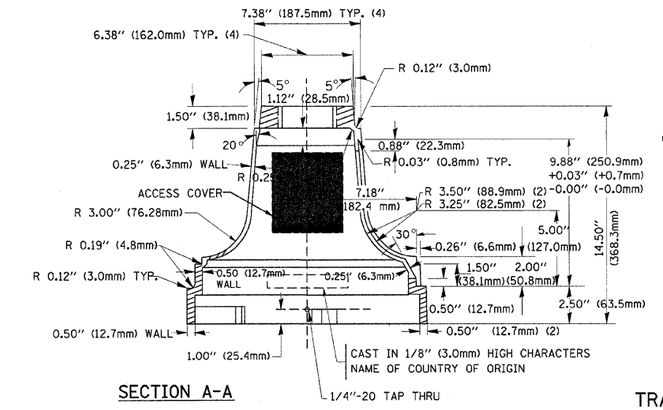




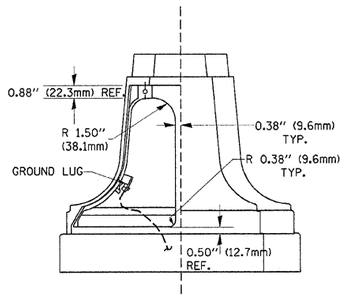
SECTION B-B



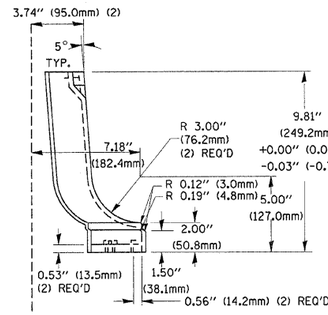
SECTION D-D



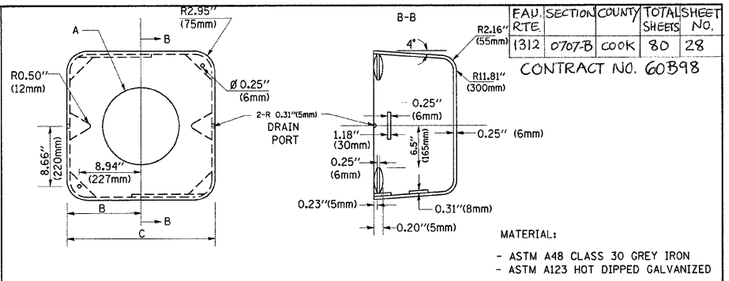
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

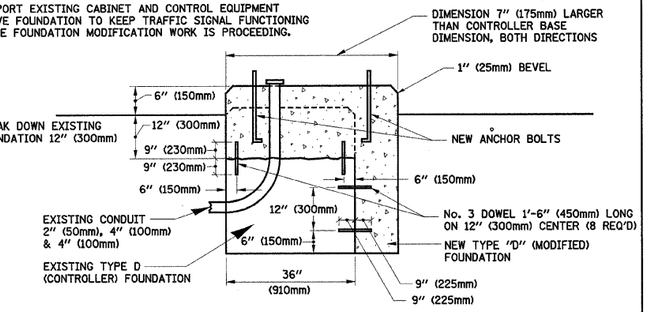


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

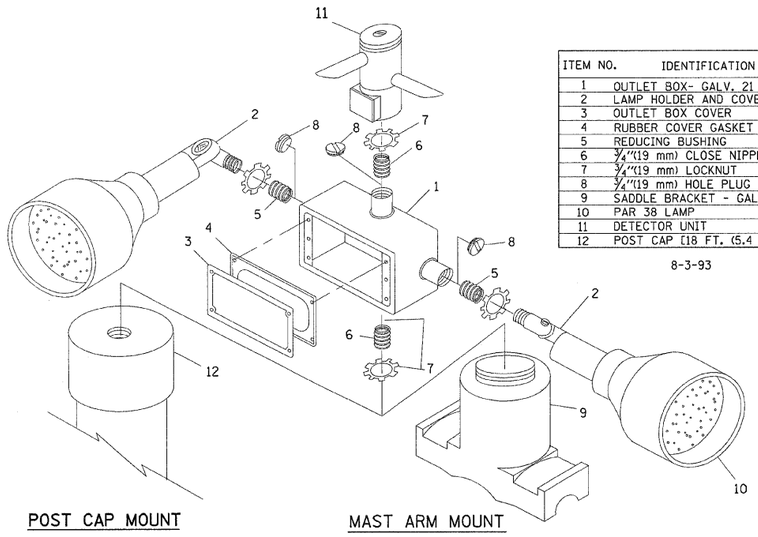
SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

8-3-93

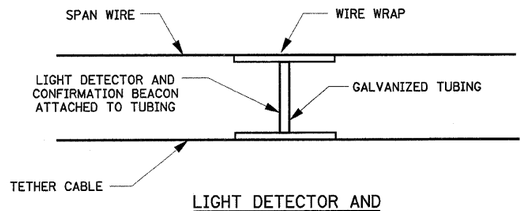
POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

NOTES:

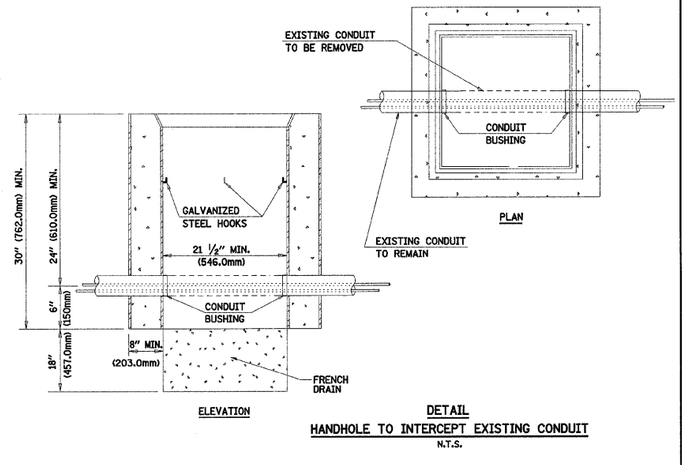
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ¾"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

FILE NAME =	USER NAME = kanthaphixaybo	DESIGNED -	REVISED -
c:\projects\traffic\t070028\emerson.dgn		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 10/2/2007	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	28

CONTRACT NO. 60B98

FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	29
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

GENERAL ELECTRICAL PLAN NOTES

1. THIS PROJECT INCLUDES THE REMOVAL AND REPLACEMENT OF THE EMERSON ST. BRIDGE OVER THE NORTH SHORE CHANNEL. ALSO INCLUDED IS THE RECONSTRUCTION OF THE BRIDGE APPROACHES.

   THERE IS EXISTING CITY OF EVANSTON LIGHTING ALONG EMERSON ST. WHEN THE BRIDGE IS REMOVED THERE IS EXISTING LIGHTING WHICH WILL BE REMOVED AND SALVAGED BY THE CITY. EXISTING LIGHTING ON THE APPROACHES WILL ALSO BE IN CONFLICT WITH THE RECONSTRUCTION AND WILL HAVE TO BE REMOVED. THE END OF THIS LIGHTING SYSTEM IS AT MCCORMICK BLVD. THE BRIDGE WILL BE CLOSED DURING CONSTRUCTION THEREFORE TEMPORARY LIGHTING IS NOT REQUIRED. THE CONTRACTOR WILL RECONNECT THE PROPOSED LIGHTING TO THE EXISTING LIGHTING SYSTEM EAST OF THE BRIDGE

2. THE CONTRACTOR SHALL REQUEST A FORMAL MAINTENANCE TRANSFER BEFORE ANY WORK. LIGHTING OR OTHER BEGINS. THE CONTRACTOR SHALL CONTACT THE CITY OF EVANSTON DIVISION OF TRANSPORTATION AT (847) 866-2922.

3. THE CONTRACTOR SHALL CONTACT THE ELECTRICAL UTILITY COMPANY TO COORDINATE THE ELECTRICAL SERVICE WORK.

4. TO MAINTAIN THE STRUCTURAL INTEGRITY OF THE LIGHT POLES. THE LIGHT POLES SHALL NOT BE ERECTED AND/OR LEFT TO STAND WITHOUT LUMINAIRE. NOTE THAT THE LIGHT POLES WILL NOT BE PAID FOR UNTIL THE POLES ARE FULLY APPROVED AND THE LUMINAIRES ARE INSTALLED.

5. THE QUANTITIES OF RACEWAYS WHERE INDICATED IN THESE PLANS ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE COMPLIANCE WITH THE SPECIFIED REQUIREMENTS.

6. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE SPLICED AND BONDED TO EACH JUNCTION BOX AND PULL BOX THE CONDUCTORS PASS THROUGH. JUNCTION BOXES SHALL BE EQUIPPED WITH GROUND LUGS FOR GROUND WIRE TERMINATION WITHOUT DEGRADATION OF THE JUNCTION BOX RATING.

7. TRENCHES FOR LIGHTING RACEWAYS SHALL HAVE A MINIMUM DEPTH OF 30".

8. AT THE COMPLETION OF THE PROJECT THE LIGHTING SYSTEM SHALL BE OWNED AND MAINTAINED BY THE CITY OF EVANSTON.

9. THE PROPOSED LIGHT POLE AND LUMINAIRE SHALL MATCH THE EXISTING EQUIPMENT ALONG EMERSON STREET AND SHALL BE APPROVED BY THE CITY OF EVANSTON.

10. LIGHTING SYSTEM INSTALLATION SHALL CONFORM TO THE LATEST IDOT, STANDARDS, NEC AND LOCAL CODES.

11. THE CONTRACTOR SHALL SPLICE THE PROPOSED CABLE CONNECTIONS TO THE EXISTING LIGHTING UNITS IN THE POLE HANDHOLE. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE COST OF THE UNIT DUCT.

BILL OF MATERIALS

DESCRIPTION	UNIT	QUANTITY
JUNCTION BOX NM EMBEDDED IN STRUCTURE 18"X18"X6"	EACH	4
UNIT DUCT, 600V, 2-1/C #4, 1/C #6 GROUND (EPR-TYPE RHW), 1" DIA. POLYETHYLENE	FOOT	730
ELECTRIC CABLE IN CONDUIT 600V 1/C #6 (EPR-TYPE RHW)	FOOT	500
ELECTRIC CABLE IN CONDUIT 600V 1/C #4 (EPR-TYPE RHW)	FOOT	1000
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	560
LIGHT POLE FOUNDATION, 24" DIA.	FOOT	40
REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	7
LIGHTING FOUNDATION REMOVAL	EACH	4
LIGHT POLE ALUMINUM 30' MH, 6' DAVIT ARM	EACH	5
LUMINAIRE 400W MERCURY VAPOR	EACH	8
LIGHT POLE ALUMINUM 28' MH, 6' DAVIT ARM BRIDGE MOUNTED	EACH	3

LTG-01

REVISIONS NAME	DATE

KAM ENGINEERING, INC.
CONSULTING ENGINEERS
707A Davis Road, Suite 205
Elgin, Illinois 60123-1369

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERSON STREET OVER
NORTH SHORE CHANNEL
GENERAL NOTES AND BILL OF MATERIALS

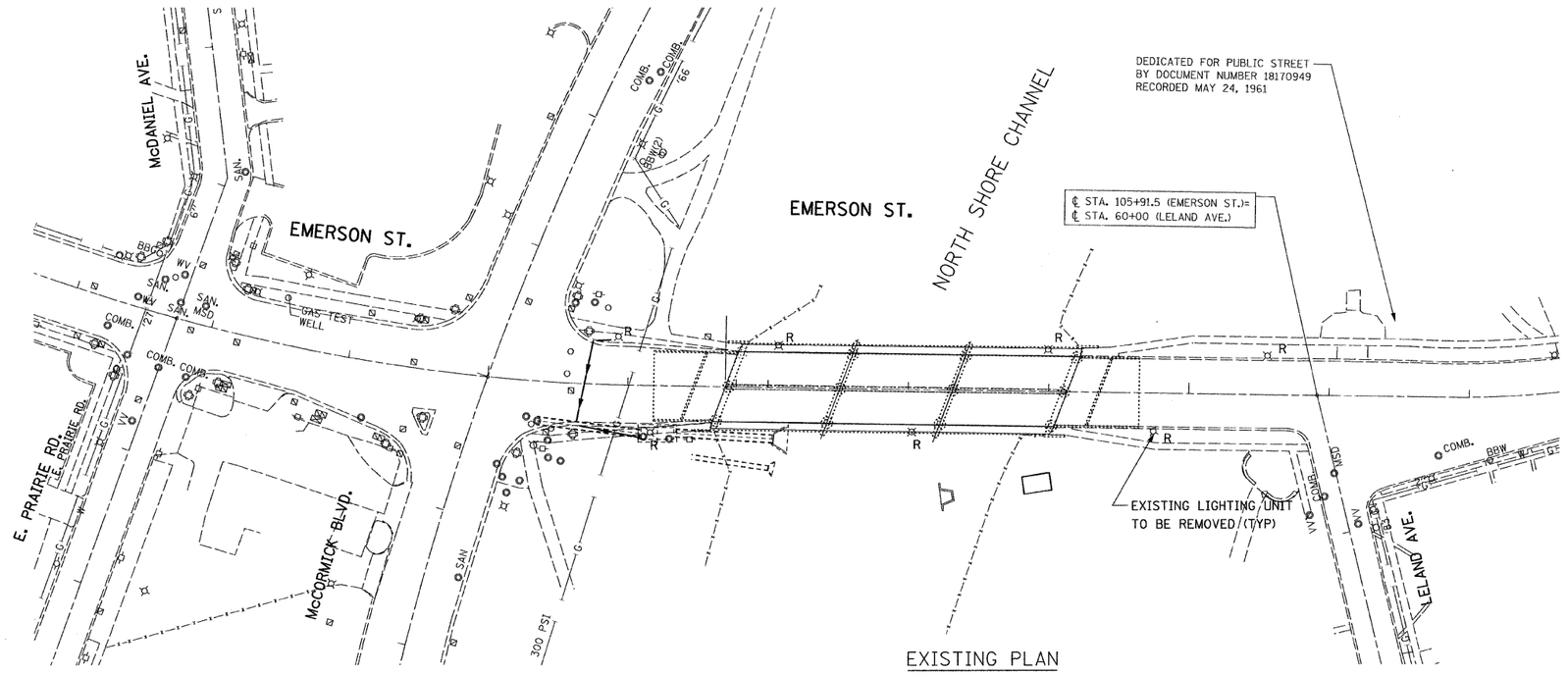
SCALE: NONE
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

$FILE$
10/17/2007

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	30
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98



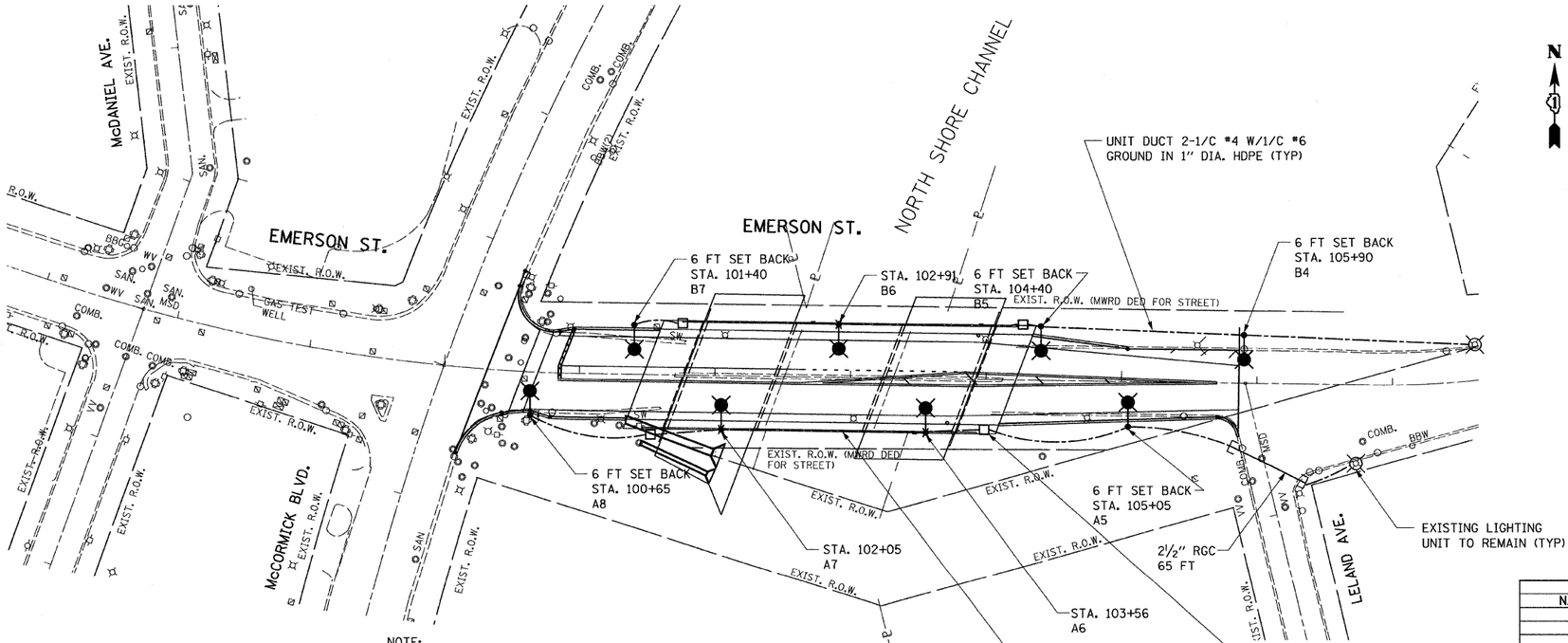
EXISTING PLAN

LEGEND:

R EXISTING LIGHTING UNIT TO BE REMOVED, SALVAGE

NOTE:

EXISTING LIGHTING UNITS SHALL BE DELIVERED TO THE CITY OF EVANSTON. THE CONTRACTOR SHALL CONTACT THOMAS TWIGG AT (847) 866-2922 FOR LOCATION.



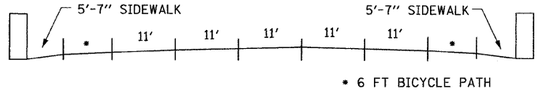
LEGEND:

- EXISTING LIGHTING UNIT TO REMAIN, 400 W, 240 V
- PROPOSED LIGHTING UNIT ALUMINUM 30 FT. M.H. 6 FT DAVIT ARM 400W MV LUMINAIRE, 240V
- PROPOSED LIGHTING UNIT ALUMINUM 30 FT. M.H. 6 FT DAVIT ARM 400 MV LUMINAIRE, 240V 400W MV LUMINAIRE ON BRIDGE STRUCTURE
- JUNCTION BOX NM EMBEDDED IN STRUCTURE 18" x 18" x 6"
- CONDUIT EMBEDDED IN STRUCTURE 2 1/2" PVC WITH 2-1/C #4, 1/C #6 GROUND
- UNIT DUCT 2-1/C #4 W/ 1/C #6 GROUND IN 1" DIA. HDPE

0 10 50 100 150

SCALE: 1"=50'

LTG-02



NOTE:
1. EXISTING LIGHTING CONTROLLER EAST ON HARTREY AVE.
2. SEE STRUCTURAL DRAWING 15 OF 32 FOR FOUNDATION IN BRIDGE STRUCTURE.
3. SEE STRUCTURAL DRAWING 32 OF 32 FOR CONDUIT AND JUNCTION BOX IN BRIDGE STRUCTURE TO COORDINATE LOCATION

PROPOSED PLAN

REVISIONS NAME	DATE

KAM ENGINEERING, INC.
CONSULTING ENGINEERS
7074 Doyle Road, Suite 205
Elgin, Illinois 60123-1369

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERSON STREET OVER NORTH SHORE CHANNEL LIGHTING PLANS

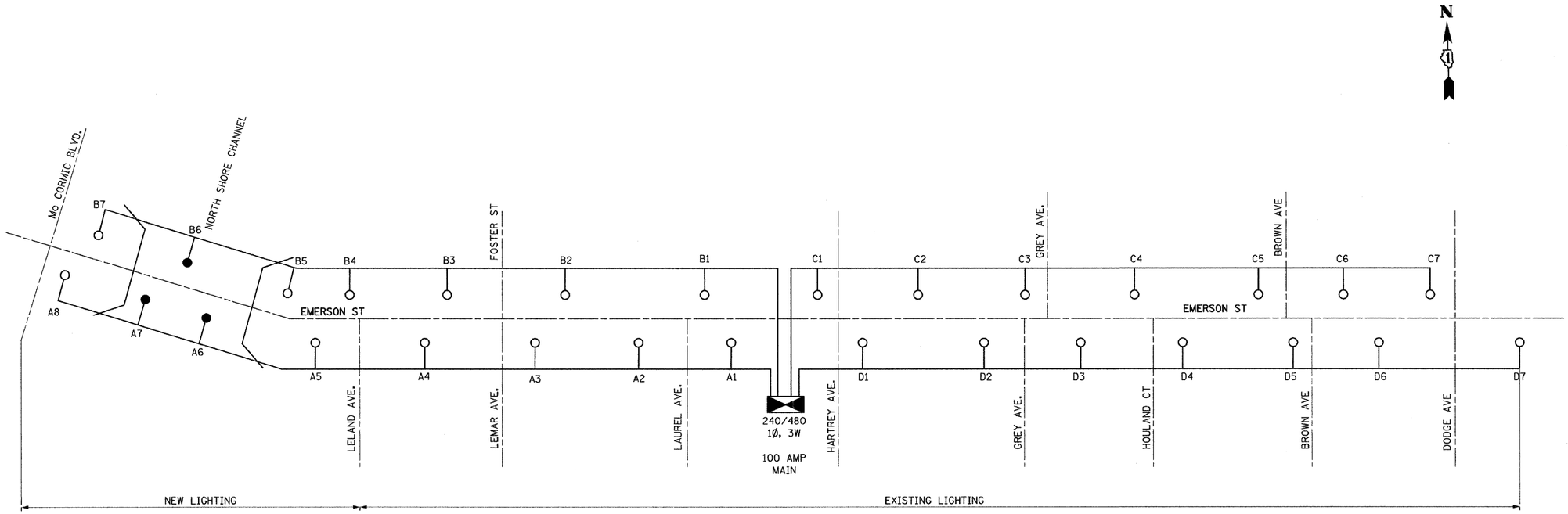
SCALE: 1"=50'
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

$FILE$
10/17/2007

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	30	31
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98



LOAD TABLE

CKT	AMPS	WATTS	BREAKER SIZE
A	10.16	3200	50 A
B	8.89	2800	50 A
C	8.89	2800	50 A
D	8.89	2800	50 A
E	SPARE	SPARE	50 A
F	SPARE	SPARE	50 A
TOTAL	36.83A	11,600W	

LEGEND:

- LIGHTING UNIT ALUMINUM 30 FT MH 6 FT DAVIT ARM, 400W, 240V
- LIGHTING UNIT ALUMINUM 30 FT MH 6 FT DAVIT ARM, 400W, 240V BRIDGE MOUNTED
- EXISTING CONTROLLER

LTG-03

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SINGLE LINE DIAGRAM
CITY OF EVANSTON
LIGHTING CONTROLLER

KAM ENGINEERING,INC.
CONSULTING ENGINEERS
707A Dovis Road, Suite 205
Elgin, Illinois 60123-1369

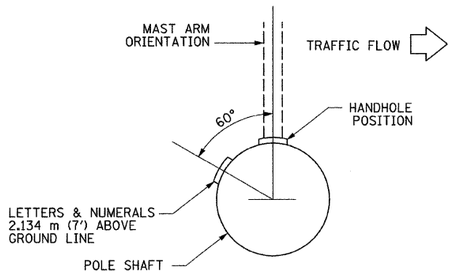
SCALE: NONE
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

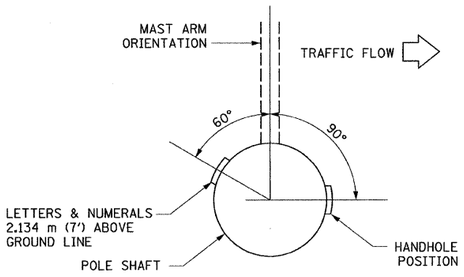
$FILE$
10/17/2007

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	32
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

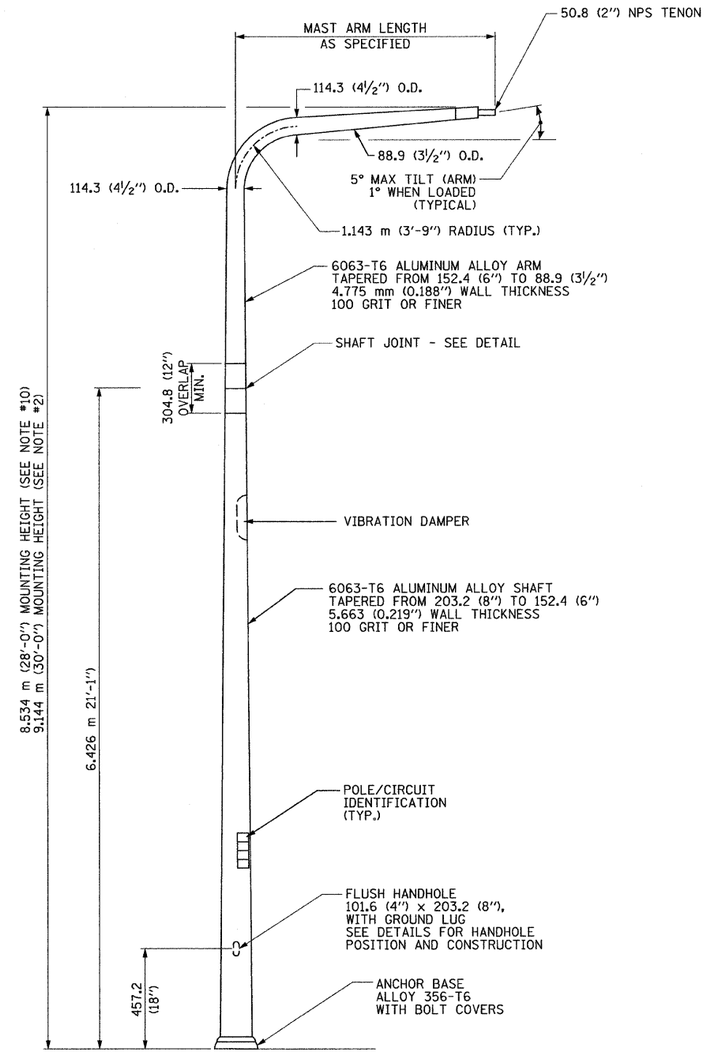
CONTRACT NO. 60B98



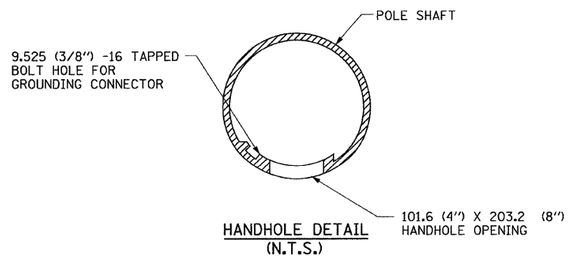
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES MOUNTED ON BRIDGE PARAPET OR BARRIER WALL



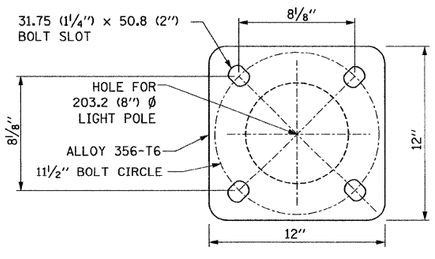
POSITION OF HANDHOLE AND POLE NUMBER FOR SINGLE MAST ARM POLES



SINGLE ARM POLE



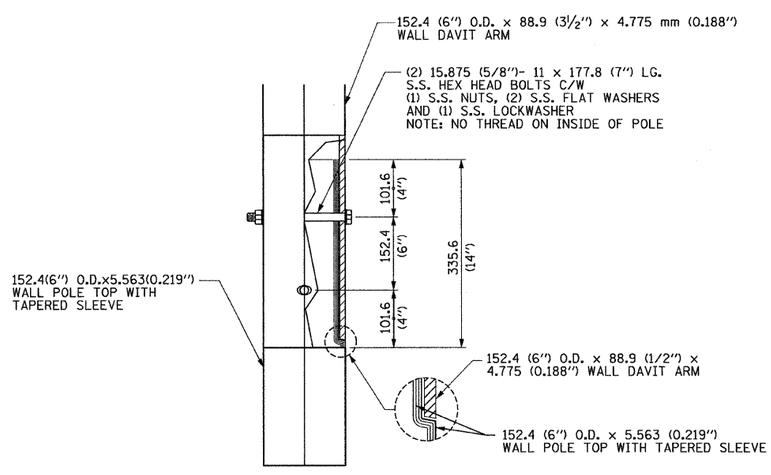
HANDHOLE DETAIL (N.T.S.)



LIGHT POLE BASE PLATE DETAIL
(FOR POLE MOUNTED ON 292.0 mm (11½ INCH) BOLT CIRCLE FOUNDATION)

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. MOUNTING HEIGHT IS DEFINED AS THE DISTANCE FROM THE CENTERLINE OF THE TENON TO THE BOTTOM OF THE ANCHOR BASE.
3. TWO PIECE SHAFT WILL BE MATCHED MARKED AND INTERCHANGEABLE BETWEEN DIFFERENT UNITS. FIELD DRILLING OF THE HOLES WILL NOT BE ALLOWED
4. THE LIGHT POLE WILL MEET AASHTO DESIGN CRITERIA AS SPECIFIED.
5. THE INSTALLING CONTRACTOR WILL PROVIDE A UL LISTED GROUNDING CONNECTOR. BURNDY K2C23, T & B SP4DL OR APPROVED EQUAL.
6. LIGHT POLES WILL NOT BE INSTALLED WITHOUT MAST ARMS AND LUMINAIRES.
7. LIGHT POLES WILL BE SET PLUMB ON THE FOUNDATION WITHOUT THE USE OF LEVELING NUTS, WASHERS OR SHIMS.
8. LIGHTING UNIT IDENTIFICATION NUMBERS SHALL BE INSTALLED BEFORE THE LIGHTING UNIT IS ENERGIZED.
9. GROUND MOUNTED POLES SHALL BE SET BACK 6 FT. FROM FACE OF CURB.
10. BRIDGE MOUNTED POLE SHALL BE 28 FT MOUNTING HEIGHT



DAVIT ARM CONNECTION
[355.6 mm (14") OVERLAP SHOWN]

LTG-04

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERSON STREET OVER NORTH SHORE CHANNEL LIGHTING DETAILS

SCALE: NONE
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

KAM ENGINEERING, INC.
CONSULTING ENGINEERS
707A Devis Road, Suite 205
Elgin, Illinois 60123-1369

$FILE$
10/17/2007

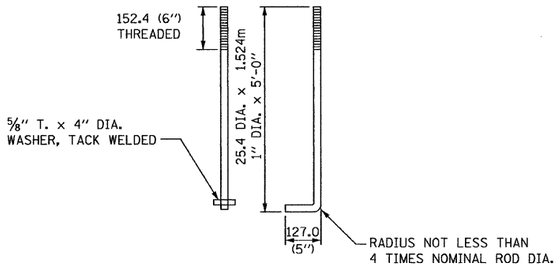
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	33
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

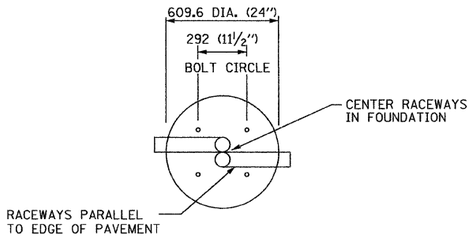
LIGHT POLE FOUNDATION DEPTH TABLE

9.144M (30FT.) TO 10.668M (35 FT.) MOUNTING HEIGHT

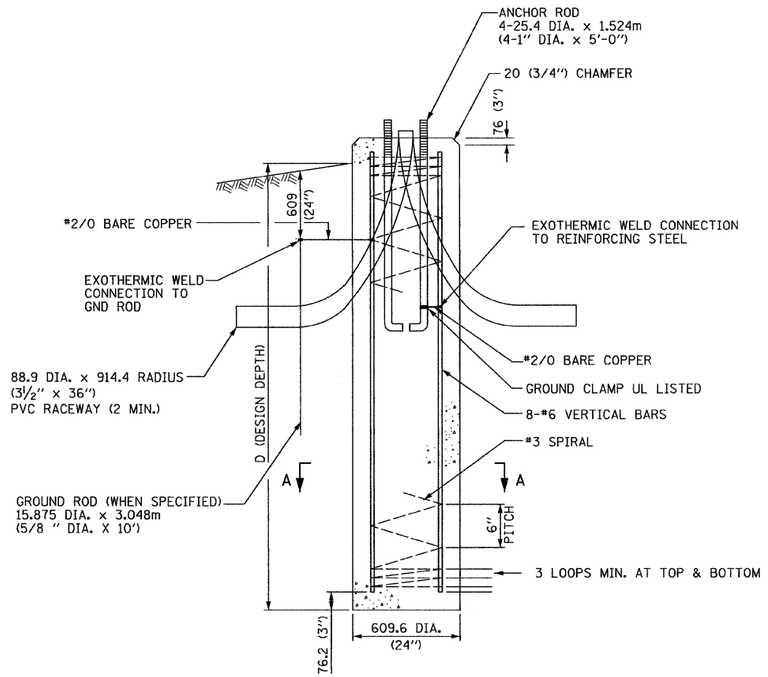
SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0375 TON/SQ. FT.	3.35M (11'-0")	3.85M (12'-8")
MEDIUM CLAY Qu = 0.75 TON/SQ. FT.	2.74M (9'-0")	4.52M (14'-10")
STIFF CLAY Qu = 1.50 TON/ SQ. FT.	2.29M (7'-6")	2.61M (8'-7")
LOOSE SAND Ø = 34°	2.90M (9'-6")	3.22M (10'-7")
MEDIUM SAND Ø = 37.5°	2.74M (9'-0")	2.99M (9'-10")
DENSE SAND Ø = 40°	2.51M (8'-3")	2.91M (9'-7")



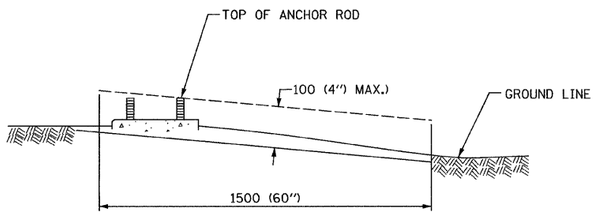
ANCHOR BOLT DETAIL



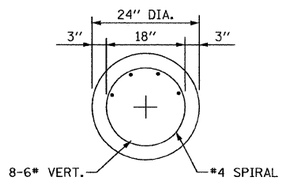
TOP VIEW



FOUNDATION DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.
2. THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE CONCRETE IN PLACED.
3. THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 100MM (4 IN.) ABOVE THE FINISH GRADE WITHIN A 1.5M (60 IN.) CHORD ACROSS THE FOUNDATION WITH ANCHOR RODS INCLUDED. IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS. THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
4. THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE. THE LINER SHALL BE WITHDRAWN: AS THE CONCRETE IS DEPOSITED.
5. THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCED A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 20MM (3/4-IN.)
6. THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
7. THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
8. THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH. AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
9. ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASTHO M 232. THE MECHANICAL PLATING METHOD CONFORMING TO AASTHO M 298. CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UM (6 MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
10. THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 150 MM (6 INCHES) WITH A MINIMUM OF 75 MM (3 INCHES) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
11. ANCHOR RODS SHALL PROJECT 69.9MM (2¾") ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED. THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
12. THE CONTRACTOR SHALL USE A #3 SPIRAL AT 152.4MM (6") PITCH OR MAY SUBSTITUTE #3 TIES AT 304.8MM (12") O.C. WITH THE APPROVAL OF THE ENGINEER.
13. THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
14. THE RACEWAYS SHALL PROJECT 25.4MM (1") ABOVE THE TOP OF THE FOUNDATION.

LTG-05

REVISIONS NAME	DATE

KAM ENGINEERING, INC.
CONSULTING ENGINEERS
707A Davis Road, Suite 205
Elgin, Illinois 60123-2369

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERSON STREET OVER NORTH SHORE CHANNEL LIGHTING DETAILS

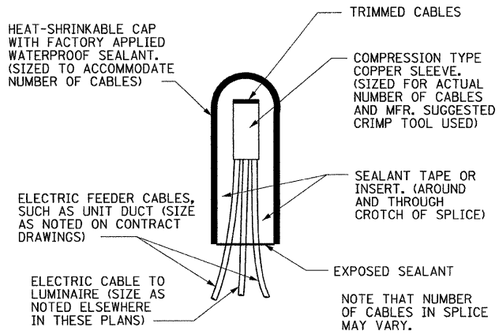
SCALE: NONE
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

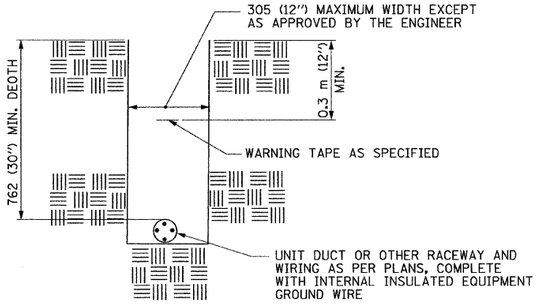
$FILE$
10/17/2007

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	34
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 60B98

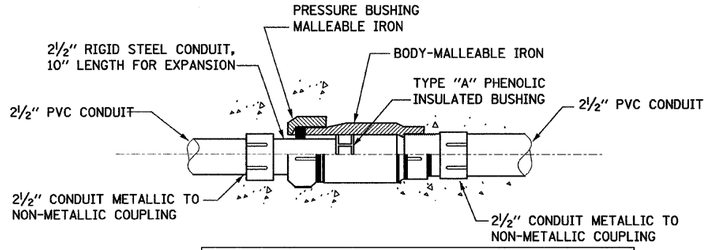


SPLICING DETAIL



TYPICAL WIRING IN TRENCH DETAIL

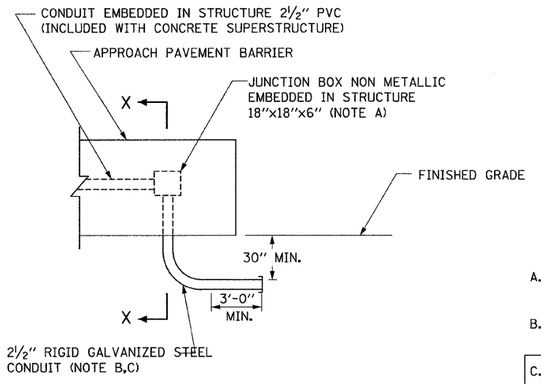
N.T.S.



NOTE:
ALL CONDUIT, FITTINGS, AND COUPLINGS SHALL BE INCLUDED IN THE COST OF CONCRETE SUPERSTRUCTURE

CONDUIT EXPANSION FITTING

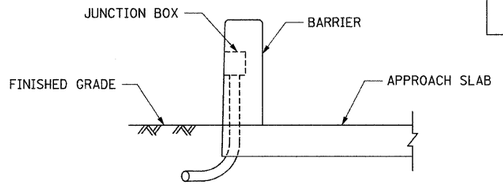
USE O-Z GEDNEY AX-8-300, OR APPROVED EQUAL



A. COORDINATE PLACEMENT OF JUNCTION BOX WITH BRIDGE PLANS.

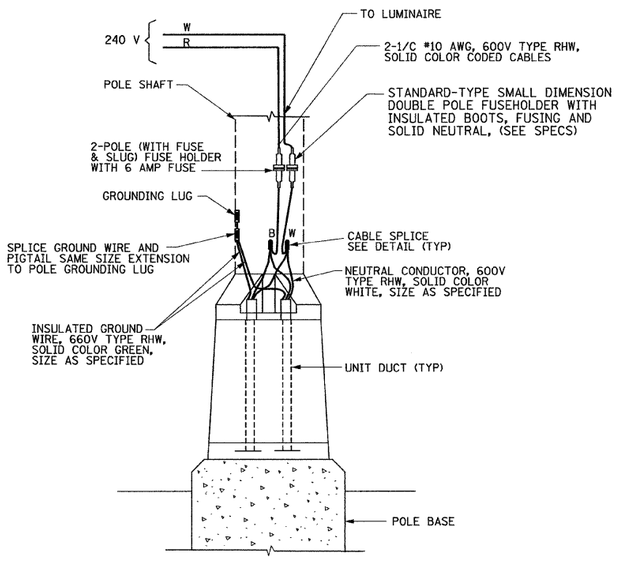
B. COORDINATE CONDUIT PLACEMENT TO TERMINATE OUTSIDE OF PAVEMENT.

C. COST OF RIGID GALVANIZED STEEL RACEWAY SHALL BE INCLUDED WITH JUNCTION BOX NON METALLIC EMBEDDED IN STRUCTURE.



SECTION X-X

JUNCTION BOX EMBEDDED IN STRUCTURE



POLE BASE WIRING DIAGRAM

SINGLE MAST ARM

N.T.S

LTG-06

REVISIONS NAME	DATE

KAM ENGINEERING, INC.
CONSULTING ENGINEERS
7074 Davis Road, Suite 205
Elgin, Illinois 60123-1569

ILLINOIS DEPARTMENT OF TRANSPORTATION

EMERSON STREET OVER NORTH SHORE CHANNEL LIGHTING DETAILS

SCALE: NONE
DATE: 10-17-07

DRAWN BY: RV
DESIGNED BY: BL
CHECKED BY: KG

$FILE$
10/17/2007

Bench Mark: Cross cut in island in the southwest quadrant of the Emerson Street and McCormick Blvd. intersection. Elev. 599.75.

Existing Structure: S.N. 016-0655, Original Construction date 1961. The structure consists of a 3 span precast, prestressed concrete deck beam structure supported on individual drilled shaft column bents and closed concrete stub abutments on drilled shafts. The existing structure length is 245'-$9\frac{5}{8}$" back to back of abutments and the width is 62'-0". Structure to be removed and replaced. Traffic to be detoured during construction.

Salvage: Light poles. See lighting plans

Staging: Remove existing structure.
Install temporary soil retention system.
Relocate sewers. Construct bridge.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	35
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
32 SHEETS

Contract # 60B98

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	593.68	564.78	564.78	593.96

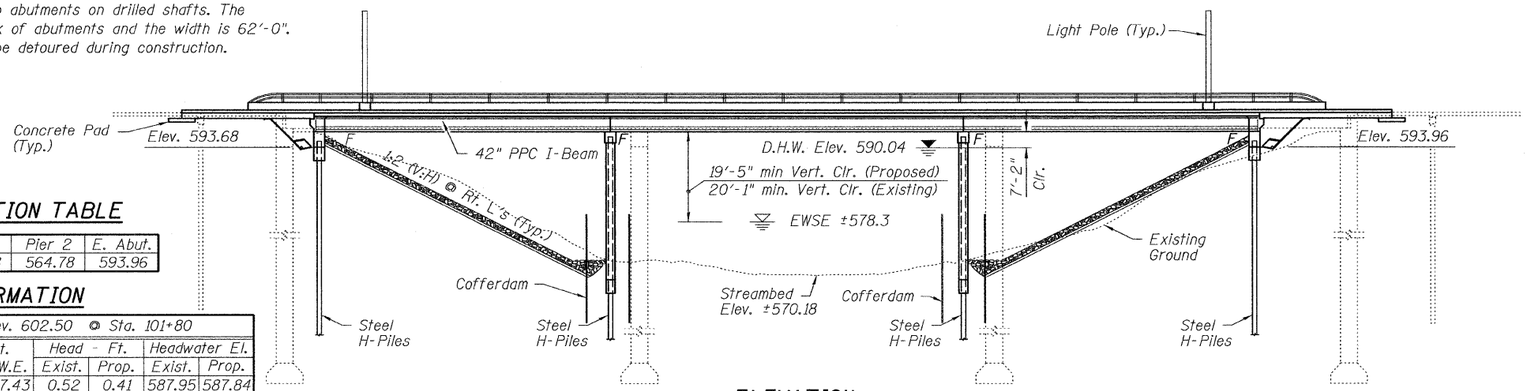
WATERWAY INFORMATION

Drainage Area = Indeterminate Low Grade Elev. 602.50 @ Sta. 101+80

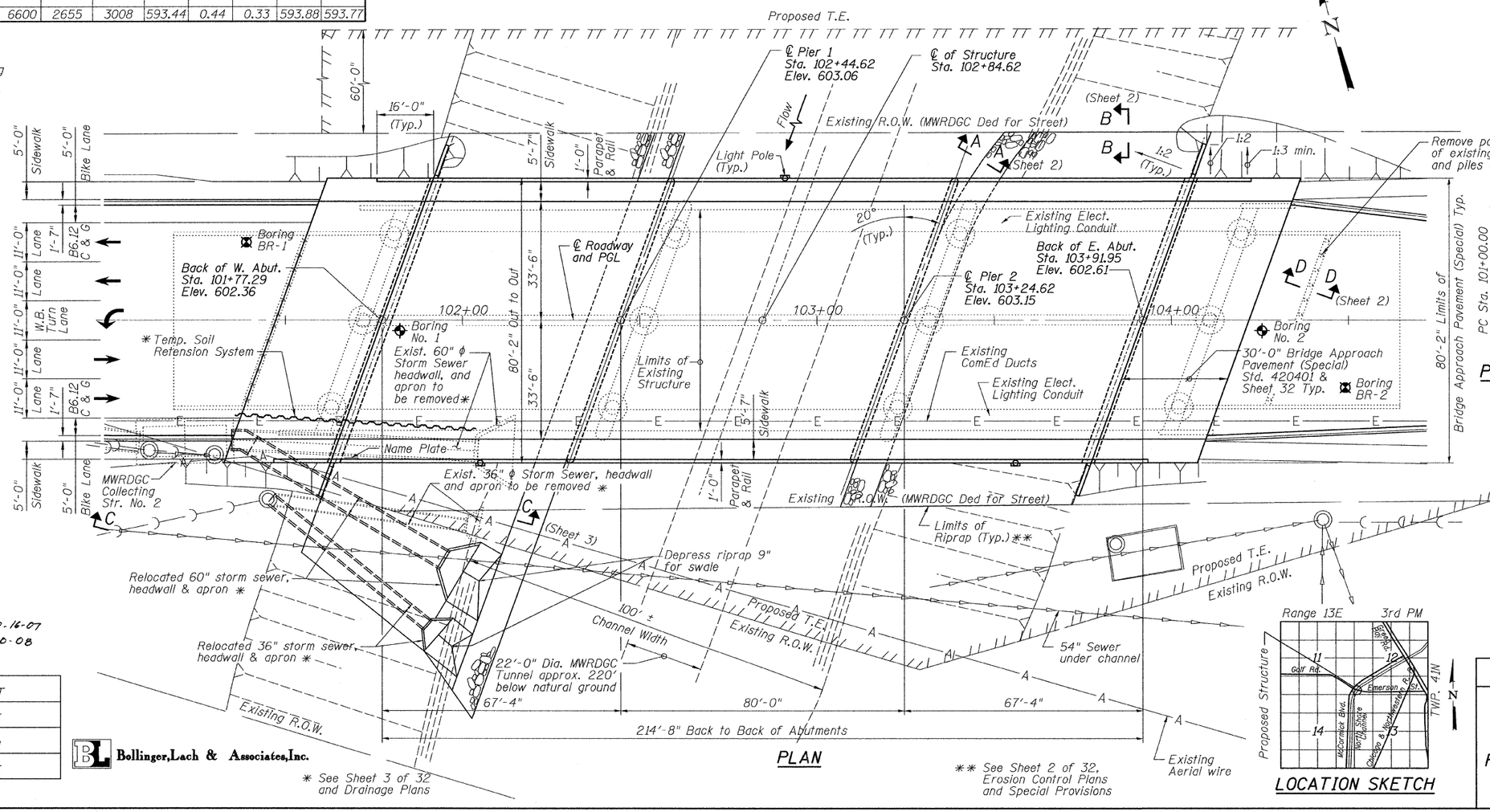
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	3220	1708	1976	587.43	0.52	0.41	587.95	587.84
Design	50	4600	2099	2425	590.04	0.50	0.38	590.54	590.42
Base	100	5180	2223	2538	590.84	0.46	0.37	591.30	591.21
Overtopping									
Max. Calc.	500	6600	2655	3008	593.44	0.44	0.33	593.88	593.77

LEGEND

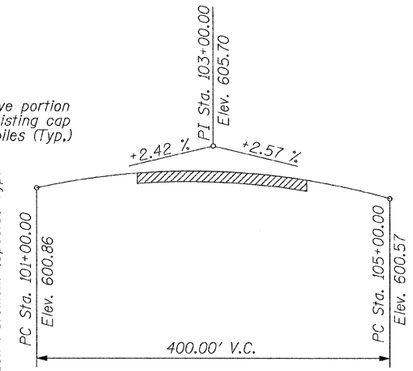
- 2007 Boring
- 1960 Boring



ELEVATION



PLAN



PROFILE GRADE EMERSON STREET

Along ℄ of Roadway

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
f's = 270,000 psi (1/2" ϕ low lax. strands)
fsi = 201,960 psi (1/2" ϕ low lax. strands)

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.04g
Site Coefficient (S) = 1.0

STATE OF ILLINOIS
JOEL T. THIVE
5051
LICENSED
ITASCA
STRUCTURAL ENGINEER

DATE SIGNED: 10-16-07
EXP. DATE: 11-30-08

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson (TJD)
ENGINEER OF BRIDGES AND STRUCTURES

DESIGNED	SRT
CHECKED	JJI
DRAWN	GM
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

LOCATION SKETCH

GENERAL PLAN

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

D-91-065-07

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	36
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
32 SHEETS

Contract # 60B98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

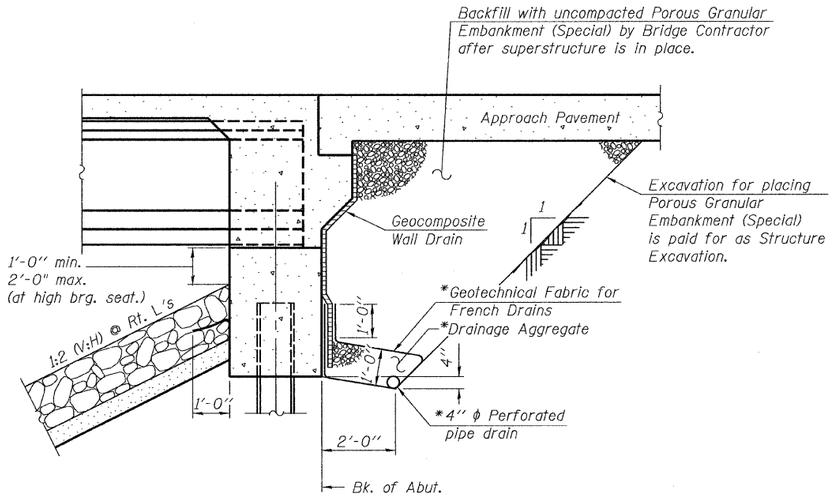
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water (except cofferdams) that is not identified in the Permanent Construction Permit. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number as shown in the contract plans.

All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

The Contractor's attention is directed to the posted load weight limit of 15 tons for vehicles on the existing structure. The contractor's operations shall not exceed the load limit. See Special Provision for "Demolition Plans for Removal of Existing Structures."



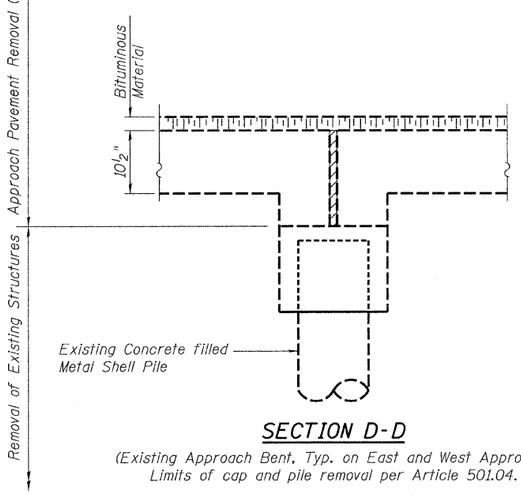
SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

INDEX OF SHEETS

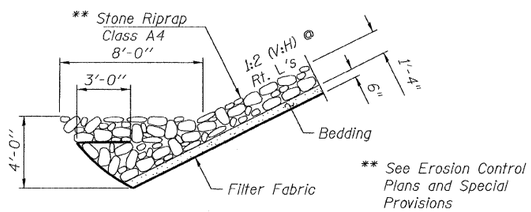


SECTION D-D

(Existing Approach Bent, Typ. on East and West Approach)
Limits of cap and pile removal per Article 501.04.

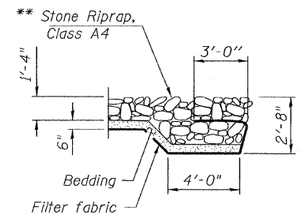
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	-	384	384
Stone Riprap, Class A4	Sq. Yd.	-	2175	2175
Filter Fabric	Sq. Yd.	-	2175	2175
Removal of Existing Structures	Each	-	-	1
Structure Excavation	Cu. Yd.	-	282	282
Concrete Structures	Cu. Yd.	-	540.4	540.4
Concrete Superstructure	Cu. Yd.	641.8	-	641.8
Bridge Deck Grooving	Sq. Yd.	1551	-	1551
Concrete Encasement	Cu. Yd.	-	34.6	34.6
Protective Coat	Sq. Yd.	2032	-	2032
Furnishing and Erecting Precast Prestressed Concrete I Beams, 42"	Foot	2544	-	2544
Reinforcement Bars, Epoxy Coated	Pound	140,160	39,160	179,320
Bar Splicers	Each	162	-	162
Aluminum Railing, Type L	Foot	430	-	430
Furnishing Steel Piles HP 14x89	Foot	-	5546	5546
Driving Piles	Foot	-	5546	5546
Test Pile Steel HP 14x89	Each	-	4	4
Pile Shoes	Each	-	62	62
Temporary Soil Retention System	Sq. Ft.	-	-	1002
Name Plates	Each	-	-	1
Geocomposite Wall Drain	Sq. Yd.	-	164	164
Pipe Underdrains for Structures, 4"	Foot	-	248	248
Cofferdam (Pier 1)	Each	-	1	1
Cofferdam (Pier 2)	Each	-	1	1
Cofferdam Excavation	Cu. Yd.	-	444	444
Controlled Low-Strength Material	Cu. Yd.	-	65.7	65.7



** See Erosion Control Plans and Special Provisions

SECTION A-A



SECTION B-B

STATION 102+84.62
BUILT BY
STATE OF ILLINOIS
FAU RT. 1312 SEC. 0707-B
LOADING HL93
STRUCTURE NO. 016-2858

NAME PLATE

See Std. 515001

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

GENERAL NOTES, TOTAL BILL OF MATERIAL AND INDEX OF SHEETS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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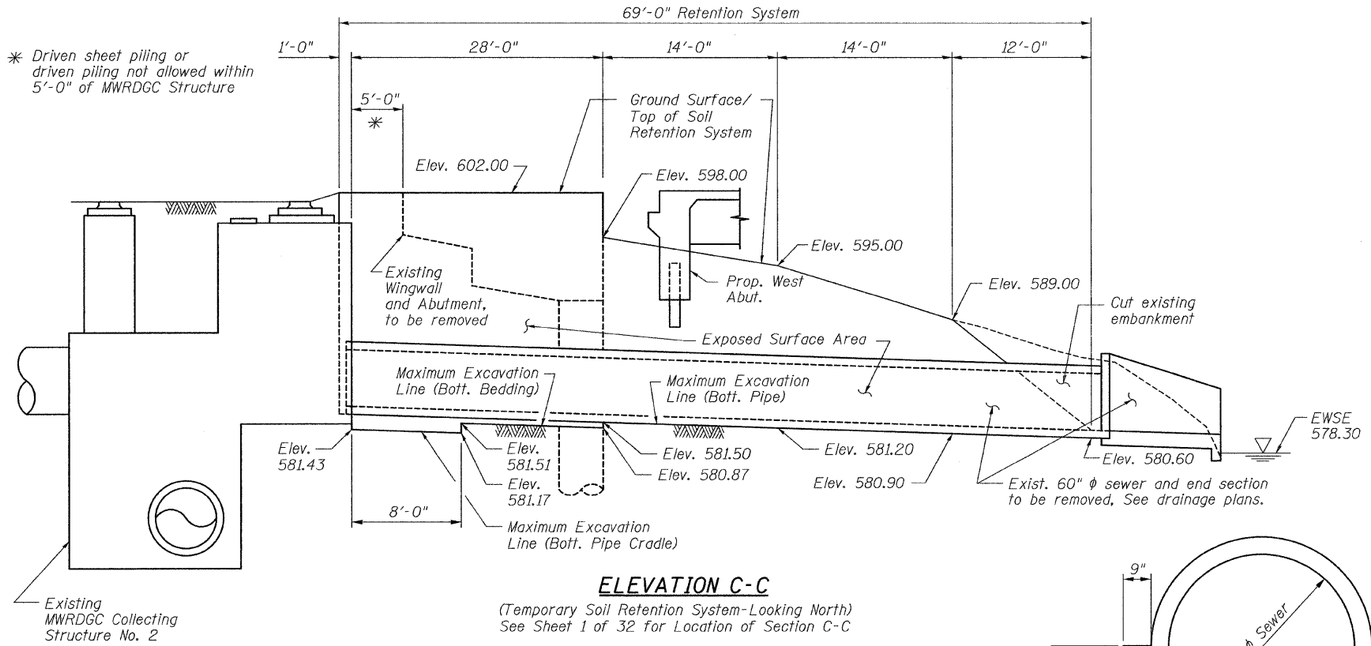
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	37
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

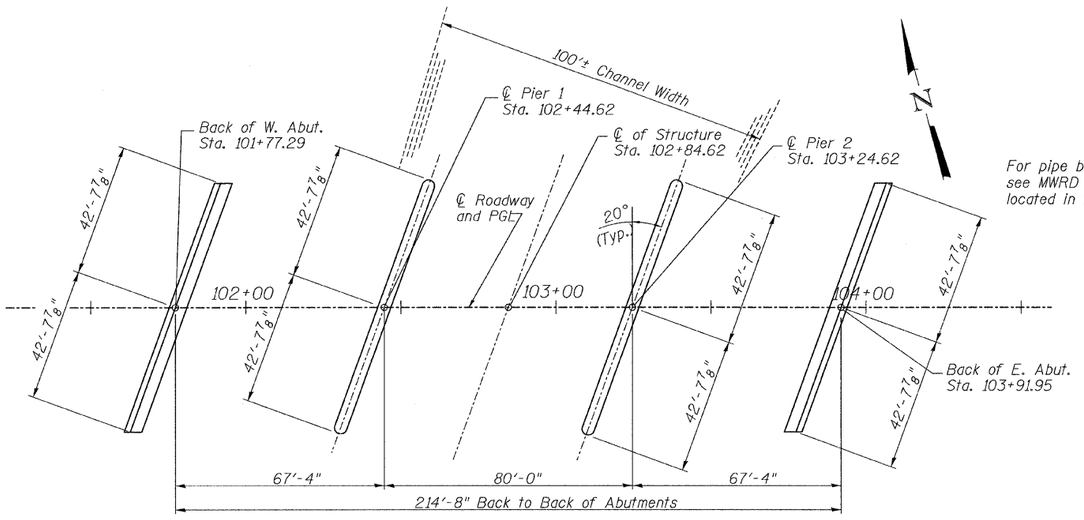
SHEET NO. 3
32 SHEETS

Contract # 60B98

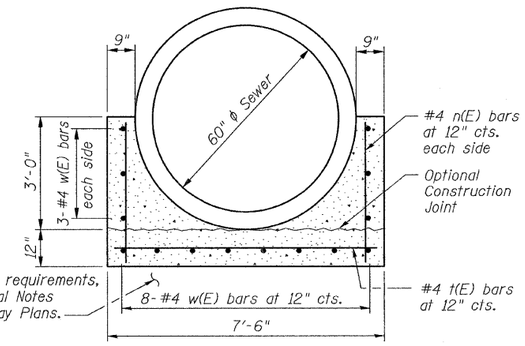


ELEVATION C-C

(Temporary Soil Retention System-Looking North)
See Sheet 1 of 32 for Location of Section C-C

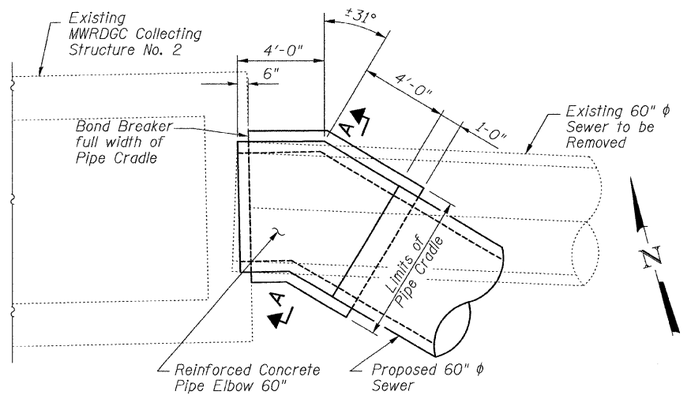


FOOTING LAYOUT



SECTION A-A SHOWING PIPE CRADLE

(Bend and cut reinforcement in field as required)



PROPOSED PLAN AT MWRDGC STRUCTURE

Sewer Relocation Notes:

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Use the temporary earth retention system is mandatory. Open cut will not be allowed on the north side of the existing 60" sewer.

Portions of the existing abutment and wingwall shall be removed as required for proper installation of Temporary Soil Retention System. Work is included in Removal of Existing Structures. Installation of the Temporary Soil Retention System is mandatory.

See Drainage Plans for additional details.

The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) shall have 24 hour a day access for heavy equipment to their facilities. Flow from the outfall structures shall not be blocked and shall be maitained at all times. See Special Provisions.

The Contractor shall exercise care when removing the existing 60 inch outfall pipe from the MWRDGC structure. The existing 60 inch pipe is lined and removal of the liner is included in the drainage items.

Any concrete removal required from the opening of the MWRDGC structure for installation of the new 60 inch pipe shall be approved by the Engineer. Space between the new 60 inch pipe and the opening shall be filled with nonshrink grout, inside and out. Concrete removal and grout are included in the drainage items.

All work for removing the existing pipes and installing the new pipes is included in the drainage items. All work shall be as approved by the Engineer in the field.

Reinforced Concrete Pipe Elbow 60" shall be in accordance with Article 542.08 of the Standard Specifications. Contractor is responsible for the design and detailing of Reinforced Concrete Pipe Elbow 60". Contractor to Submit design to the Engineer for approval.

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	n(E)	16	#4	3'-9"	——
	t(E)	9	#4	7'-3"	——
	w(E)	14	#4	8'-8"	⌟
**	Reinforcement Bars, Epoxy Coated			Lbs.	170
**	Concrete Structures			Cu. Yd.	4.2
	Temporary Soil Retention System			Sq. ft.	1002

** Roadway Quantity

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

TEMPORARY SOIL RETENTION SYSTEM, SEWER DETAILS & FOOTING LAYOUT

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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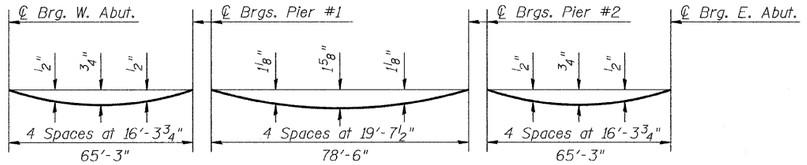
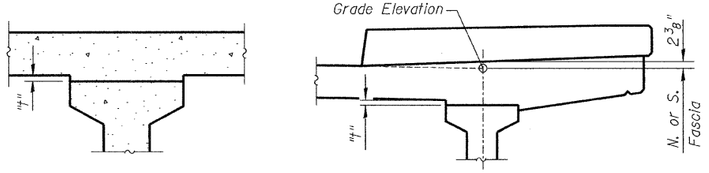


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



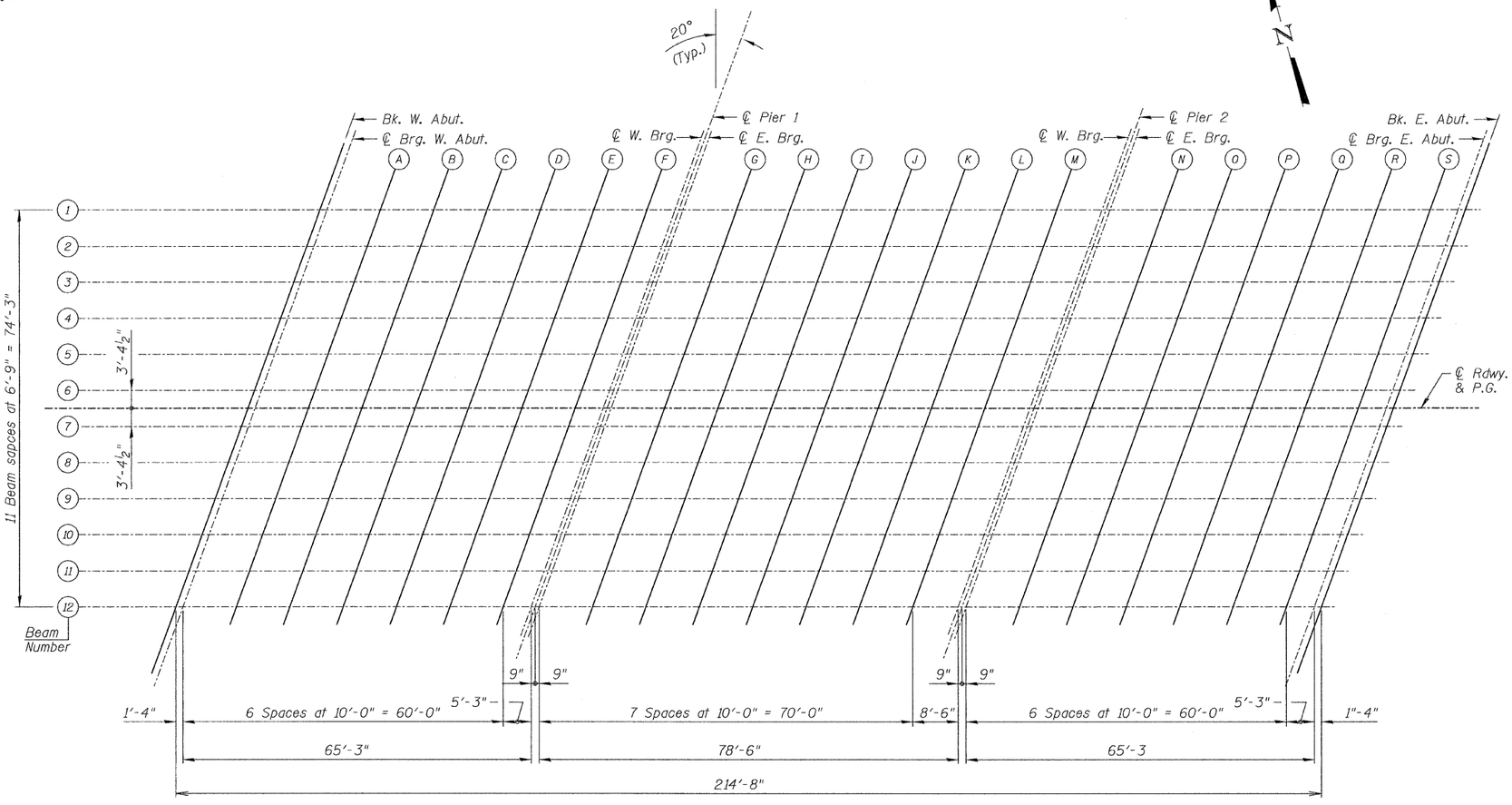
To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	38
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
32 SHEETS

Contract # 60B98



PLAN

BEAM # 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+90.80	-37.13	601.80	601.80
CL Brg. W. Abut.	101+92.13	-37.13	601.82	601.82
A	102+02.13	-37.13	601.94	601.97
B	102+12.13	-37.13	602.05	602.10
C	102+22.13	-37.13	602.14	602.21
D	102+32.13	-37.13	602.23	602.29
E	102+42.13	-37.13	602.30	602.34
F	102+52.13	-37.13	602.36	602.37
CL W. Brg. Pier 1	102+57.38	-37.13	602.38	602.38
CL E. Brg. Pier 1	102+58.88	-37.13	602.39	602.39
G	102+68.88	-37.13	602.43	602.48
H	102+78.88	-37.13	602.45	602.55
I	102+88.88	-37.13	602.46	602.60
J	102+98.88	-37.13	602.46	602.61
K	103+08.88	-37.13	602.45	602.58
L	103+18.88	-37.13	602.43	602.52
M	103+28.88	-37.13	602.39	602.44
CL W. Brg. Pier 2	103+37.38	-37.13	602.35	602.35
CL E. Brg. Pier 2	103+38.88	-37.13	602.34	602.34
N	103+48.88	-37.13	602.28	602.31
O	103+58.88	-37.13	602.20	602.26
P	103+68.88	-37.13	602.12	602.18
Q	103+78.88	-37.13	602.02	602.08
R	103+88.88	-37.13	601.90	601.95
S	103+98.88	-37.13	601.78	601.80
CL Brg. E. Abut.	104+04.13	-37.13	601.71	601.71
Back of East Abut.	104+05.46	-37.13	601.69	601.69

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-E 11-1-06

Bollinger, Lach & Associates, Inc.

TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	39
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
32 SHEETS

Contract # 60B98

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+88.35	-30.38	601.90	601.90
CL Brg. W. Abut.	101+89.68	-30.38	601.92	601.92
A	101+99.68	-30.38	602.05	602.07
B	102+09.68	-30.38	602.16	602.21
C	102+19.68	-30.38	602.26	602.32
D	102+29.68	-30.38	602.34	602.40
E	102+39.68	-30.38	602.42	602.46
F	102+49.68	-30.38	602.48	602.49
CL W. Brg. Pier 1	102+54.93	-30.38	602.50	602.50
CL E. Brg. Pier 1	102+56.43	-30.38	602.51	602.51
G	102+66.43	-30.38	602.55	602.61
H	102+76.43	-30.38	602.58	602.68
I	102+86.43	-30.38	602.60	602.72
J	102+96.43	-30.38	602.60	602.73
K	103+06.43	-30.38	602.59	602.71
L	103+16.43	-30.38	602.57	602.66
M	103+26.43	-30.38	602.53	602.58
CL W. Brg. Pier 2	103+34.93	-30.38	602.50	602.50
CL E. Brg. Pier 2	103+36.43	-30.38	602.49	602.49
N	103+46.43	-30.38	602.43	602.46
O	103+56.43	-30.38	602.36	602.41
P	103+66.43	-30.38	602.27	602.33
Q	103+76.43	-30.38	602.18	602.23
R	103+86.43	-30.38	602.07	602.11
S	103+96.43	-30.38	601.95	601.96
CL Brg. E. Abut.	104+01.68	-30.38	601.88	601.88
Back of East Abut.	104+03.01	-30.38	601.86	601.86

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+85.89	-23.62	602.01	602.01
CL Brg. W. Abut.	101+87.22	-23.62	602.02	602.02
A	101+97.22	-23.62	602.15	602.18
B	102+07.22	-23.62	602.27	602.32
C	102+17.22	-23.62	602.37	602.43
D	102+27.22	-23.62	602.46	602.51
E	102+37.22	-23.62	602.53	602.58
F	102+47.22	-23.62	602.60	602.61
CL W. Brg. Pier 1	102+52.47	-23.62	602.63	602.63
CL E. Brg. Pier 1	102+53.97	-23.62	602.64	602.64
G	102+63.97	-23.62	602.68	602.73
H	102+73.97	-23.62	602.71	602.81
I	102+83.97	-23.62	602.73	602.85
J	102+93.97	-23.62	602.74	602.87
K	103+03.97	-23.62	602.73	602.85
L	103+13.97	-23.62	602.71	602.80
M	103+23.97	-23.62	602.68	602.72
CL W. Brg. Pier 2	103+32.47	-23.62	602.64	602.64
CL E. Brg. Pier 2	103+33.97	-23.62	602.64	602.64
N	103+43.97	-23.62	602.58	602.61
O	103+53.97	-23.62	602.51	602.56
P	103+63.97	-23.62	602.43	602.49
Q	103+73.97	-23.62	602.34	602.39
R	103+83.97	-23.62	602.23	602.27
S	103+93.97	-23.62	602.11	602.13
CL Brg. E. Abut.	103+99.22	-23.62	602.05	602.05
Back of East Abut.	104+00.55	-23.62	602.03	602.03

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+83.43	-16.88	602.11	602.11
CL Brg. W. Abut.	101+84.76	-16.88	602.13	602.13
A	101+94.76	-16.88	602.26	602.28
B	102+04.76	-16.88	602.37	602.42
C	102+14.76	-16.88	602.48	602.54
D	102+24.76	-16.88	602.57	602.63
E	102+34.76	-16.88	602.65	602.69
F	102+44.76	-16.88	602.72	602.73
CL W. Brg. Pier 1	102+50.01	-16.88	602.75	602.75
CL E. Brg. Pier 1	102+51.51	-16.88	602.76	602.76
G	102+61.51	-16.88	602.80	602.86
H	102+71.51	-16.88	602.84	602.93
I	102+81.51	-16.88	602.86	602.98
J	102+91.51	-16.88	602.87	603.00
K	103+01.51	-16.88	602.87	602.99
L	103+11.51	-16.88	602.85	602.94
M	103+21.51	-16.88	602.82	602.87
CL W. Brg. Pier 2	103+30.01	-16.88	602.79	602.79
CL E. Brg. Pier 2	103+31.51	-16.88	602.78	602.78
N	103+41.51	-16.88	602.73	602.76
O	103+51.51	-16.88	602.66	602.71
P	103+61.51	-16.88	602.59	602.65
Q	103+71.51	-16.88	602.50	602.55
R	103+81.51	-16.88	602.39	602.43
S	103+91.51	-16.88	602.28	602.29
CL Brg. E. Abut.	103+96.76	-16.88	602.21	602.21
Back of East Abut.	103+98.09	-16.88	602.19	602.19

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-E

11-1-06

Bollinger, Lach & Associates, Inc.

TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	40
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 6
32 SHEETS

Contract # 60B98

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+80.98	-10.13	602.21	602.21
CL Brg. W. Abut.	101+82.31	-10.13	602.23	602.23
A	101+92.31	-10.13	602.36	602.39
B	102+02.31	-10.13	602.48	602.53
C	102+12.31	-10.13	602.59	602.65
D	102+22.31	-10.13	602.68	602.74
E	102+32.31	-10.13	602.77	602.81
F	102+42.31	-10.13	602.84	602.85
CL W. Brg. Pier 1	102+47.56	-10.13	602.87	602.87
CL E. Brg. Pier 1	102+49.06	-10.13	602.88	602.88
G	102+59.06	-10.13	602.93	602.98
H	102+69.06	-10.13	602.97	603.06
I	102+79.06	-10.13	602.99	603.11
J	102+89.06	-10.13	603.00	603.14
K	102+99.06	-10.13	603.00	603.12
L	103+09.06	-10.13	602.99	603.08
M	103+19.06	-10.13	602.97	603.01
CL W. Brg. Pier 2	103+27.56	-10.13	602.94	602.94
CL E. Brg. Pier 2	103+29.06	-10.13	602.93	602.93
N	103+39.06	-10.13	602.88	602.91
O	103+49.06	-10.13	602.82	602.87
P	103+59.06	-10.13	602.74	602.80
Q	103+69.06	-10.13	602.65	602.71
R	103+79.06	-10.13	602.55	602.60
S	103+89.06	-10.13	602.44	602.46
CL Brg. E. Abut.	103+94.31	-10.13	602.38	602.38
Back of East Abut.	103+95.64	-10.13	602.36	602.36

BEAM #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+78.52	-3.38	602.31	602.31
CL Brg. W. Abut.	101+79.85	-3.38	602.33	602.33
A	101+89.85	-3.38	602.46	602.49
B	101+99.85	-3.38	602.59	602.64
C	102+09.85	-3.38	602.70	602.76
D	102+19.85	-3.38	602.80	602.85
E	102+29.85	-3.38	602.88	602.92
F	102+39.85	-3.38	602.96	602.97
CL W. Brg. Pier 1	102+45.10	-3.38	602.99	602.99
CL E. Brg. Pier 1	102+46.60	-3.38	603.00	603.00
G	102+56.60	-3.38	603.05	603.11
H	102+66.60	-3.38	603.09	603.19
I	102+76.60	-3.38	603.12	603.24
J	102+86.60	-3.38	603.14	603.27
K	102+96.60	-3.38	603.14	603.26
L	103+06.60	-3.38	603.13	603.22
M	103+16.60	-3.38	603.11	603.15
CL W. Brg. Pier 2	103+25.10	-3.38	603.08	603.08
CL E. Brg. Pier 2	103+26.60	-3.38	603.07	603.07
N	103+36.60	-3.38	603.03	603.06
O	103+46.60	-3.38	602.97	603.02
P	103+56.60	-3.38	602.90	602.96
Q	103+66.60	-3.38	602.81	602.87
R	103+76.60	-3.38	602.72	602.76
S	103+86.60	-3.38	602.61	602.62
CL Brg. E. Abut.	103+91.85	-3.38	602.54	602.54
Back of East Abut.	103+93.18	-3.38	602.53	602.53

℄ Roadway & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+77.29	0.00	602.36	602.36
CL Brg. W. Abut.	101+78.62	0.00	602.38	602.38
A	101+88.62	0.00	602.51	602.54
B	101+98.62	0.00	602.64	602.69
C	102+08.62	0.00	602.75	602.81
D	102+18.62	0.00	602.85	602.91
E	102+28.62	0.00	602.94	602.98
F	102+38.62	0.00	603.02	603.03
CL W. Brg. Pier 1	102+43.87	0.00	603.05	603.05
CL E. Brg. Pier 1	102+45.37	0.00	603.06	603.06
G	102+55.37	0.00	603.11	603.17
H	102+65.37	0.00	603.16	603.25
I	102+75.37	0.00	603.19	603.31
J	102+85.37	0.00	603.20	603.33
K	102+95.37	0.00	603.21	603.33
L	103+05.37	0.00	603.20	603.29
M	103+15.37	0.00	603.18	603.22
CL W. Brg. Pier 2	103+23.87	0.00	603.15	603.15
CL E. Brg. Pier 2	103+25.37	0.00	603.15	603.15
N	103+35.37	0.00	603.10	603.13
O	103+45.37	0.00	603.04	603.09
P	103+55.37	0.00	602.97	603.03
Q	103+65.37	0.00	602.89	602.95
R	103+75.37	0.00	602.80	602.84
S	103+85.37	0.00	602.69	602.70
CL Brg. E. Abut.	103+90.62	0.00	602.63	602.63
Back of East Abut.	103+91.95	0.00	602.61	602.61

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

PI-E

11-1-06

TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	41
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
32 SHEETS

Contract # 60B98

BEAM #7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+76.06	3.38	602.27	602.27
CL Brg. W. Abut.	101+77.39	3.38	602.29	602.29
A	101+87.39	3.38	602.43	602.46
B	101+97.39	3.38	602.56	602.61
C	102+07.39	3.38	602.67	602.73
D	102+17.39	3.38	602.77	602.83
E	102+27.39	3.38	602.86	602.90
F	102+37.39	3.38	602.94	602.96
CL W. Brg. Pier 1	102+42.64	3.38	602.98	602.98
CL E. Brg. Pier 1	102+44.14	3.38	602.98	602.98
G	102+54.14	3.38	603.04	603.09
H	102+64.14	3.38	603.08	603.18
I	102+74.14	3.38	603.12	603.24
J	102+84.14	3.38	603.13	603.27
K	102+94.14	3.38	603.14	603.26
L	103+04.14	3.38	603.13	603.22
M	103+14.14	3.38	603.11	603.16
CL W. Brg. Pier 2	103+22.64	3.38	603.09	603.09
CL E. Brg. Pier 2	103+24.14	3.38	603.08	603.08
N	103+34.14	3.38	603.04	603.07
O	103+44.14	3.38	602.98	603.03
P	103+54.14	3.38	602.91	602.98
Q	103+64.14	3.38	602.83	602.89
R	103+74.14	3.38	602.74	602.78
S	103+84.14	3.38	602.63	602.65
CL Brg. E. Abut.	103+89.39	3.38	602.57	602.57
Back of East Abut.	103+90.72	3.38	602.56	602.56

BEAM #8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+73.60	10.13	602.10	602.10
CL Brg. W. Abut.	101+74.93	10.13	602.12	602.12
A	101+84.93	10.13	602.26	602.29
B	101+94.93	10.13	602.39	602.44
C	102+04.93	10.13	602.51	602.57
D	102+14.93	10.13	602.62	602.67
E	102+24.93	10.13	602.71	602.75
F	102+34.93	10.13	602.79	602.80
CL W. Brg. Pier 1	102+40.18	10.13	602.82	602.82
CL E. Brg. Pier 1	102+41.68	10.13	602.83	602.83
G	102+51.68	10.13	602.89	602.95
H	102+61.68	10.13	602.94	603.04
I	102+71.68	10.13	602.97	603.10
J	102+81.68	10.13	603.00	603.13
K	102+91.68	10.13	603.00	603.13
L	103+01.68	10.13	603.00	603.09
M	103+11.68	10.13	602.99	603.03
CL W. Brg. Pier 2	103+20.18	10.13	602.96	602.96
CL E. Brg. Pier 2	103+21.68	10.13	602.96	602.96
N	103+31.68	10.13	602.92	602.95
O	103+41.68	10.13	602.86	602.91
P	103+51.68	10.13	602.80	602.86
Q	103+61.68	10.13	602.72	602.78
R	103+71.68	10.13	602.63	602.67
S	103+81.68	10.13	602.53	602.54
CL Brg. E. Abut.	103+86.93	10.13	602.47	602.47
Back of East Abut.	103+88.27	10.13	602.45	602.45

BEAM #9

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+71.15	16.88	601.93	601.93
CL Brg. W. Abut.	101+72.48	16.88	601.95	601.95
A	101+82.48	16.88	602.09	602.12
B	101+92.48	16.88	602.23	602.28
C	102+02.48	16.88	602.35	602.41
D	102+12.48	16.88	602.46	602.51
E	102+22.48	16.88	602.55	602.59
F	102+32.48	16.88	602.63	602.65
CL W. Brg. Pier 1	102+37.73	16.88	602.67	602.67
CL E. Brg. Pier 1	102+39.23	16.88	602.68	602.68
G	102+49.23	16.88	602.75	602.80
H	102+59.23	16.88	602.79	602.89
I	102+69.23	16.88	602.83	602.95
J	102+79.23	16.88	602.86	602.99
K	102+89.23	16.88	602.87	602.99
L	102+99.23	16.88	602.87	602.96
M	103+09.23	16.88	602.86	602.90
CL W. Brg. Pier 2	103+17.73	16.88	602.84	602.84
CL E. Brg. Pier 2	103+19.23	16.88	602.83	602.83
N	103+29.23	16.88	602.79	602.82
O	103+39.23	16.88	602.74	602.79
P	103+49.23	16.88	602.68	602.74
Q	103+59.23	16.88	602.61	602.66
R	103+69.23	16.88	602.52	602.56
S	103+79.23	16.88	602.42	602.43
CL Brg. E. Abut.	103+84.48	16.88	602.36	602.36
Back of East Abut.	103+85.81	16.88	602.34	602.34

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-E

11-1-06

Bollinger, Lach & Associates, Inc.

TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	42
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
32 SHEETS

Contract # 60B98

BEAM #10

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+68.69	23.63	601.76	601.76
CL Brg. W. Abut.	101+70.02	23.63	601.78	601.78
A	101+80.02	23.63	601.92	601.95
B	101+90.02	23.63	602.06	602.11
C	102+00.02	23.63	602.18	602.24
D	102+10.02	23.63	602.30	602.35
E	102+20.02	23.63	602.39	602.43
F	102+30.02	23.63	602.48	602.50
CL W. Brg. Pier 1	102+35.27	23.63	602.52	602.52
CL E. Brg. Pier 1	102+36.77	23.63	602.53	602.53
G	102+46.77	23.63	602.60	602.65
H	102+56.77	23.63	602.65	602.74
I	102+66.77	23.63	602.69	602.81
J	102+76.77	23.63	602.72	602.85
K	102+86.77	23.63	602.73	602.85
L	102+96.77	23.63	602.73	602.82
M	103+06.77	23.63	602.73	602.77
CL W. Brg. Pier 2	103+15.27	23.63	602.71	602.71
CL E. Brg. Pier 2	103+16.77	23.63	602.70	602.70
N	103+26.77	23.63	602.67	602.70
O	103+36.77	23.63	602.62	602.67
P	103+46.77	23.63	602.56	602.62
Q	103+56.77	23.63	602.49	602.55
R	103+66.77	23.63	602.41	602.45
S	103+76.77	23.63	602.31	602.32
CL Brg. E. Abut.	103+82.02	23.63	602.25	602.25
Back of East Abut.	103+83.35	23.63	602.24	602.24

BEAM #11

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+66.23	30.38	601.58	601.58
CL Brg. W. Abut.	101+67.56	30.38	601.60	601.60
A	101+77.56	30.38	601.75	601.78
B	101+87.56	30.38	601.89	601.94
C	101+97.56	30.38	602.02	602.08
D	102+07.56	30.38	602.13	602.19
E	102+17.56	30.38	602.24	602.28
F	102+27.56	30.38	602.32	602.34
CL W. Brg. Pier 1	102+32.81	30.38	602.37	602.37
CL E. Brg. Pier 1	102+34.31	30.38	602.38	602.38
G	102+44.31	30.38	602.45	602.50
H	102+54.31	30.38	602.50	602.60
I	102+64.31	30.38	602.55	602.67
J	102+74.31	30.38	602.58	602.71
K	102+84.31	30.38	602.59	602.71
L	102+94.31	30.38	602.60	602.69
M	103+04.31	30.38	602.59	602.64
CL W. Brg. Pier 2	103+12.81	30.38	602.58	602.58
CL E. Brg. Pier 2	103+14.31	30.38	602.57	602.57
N	103+24.31	30.38	602.54	602.57
O	103+34.31	30.38	602.50	602.55
P	103+44.31	30.38	602.44	602.50
Q	103+54.31	30.38	602.37	602.43
R	103+64.31	30.38	602.29	602.33
S	103+74.31	30.38	602.20	602.21
CL Brg. E. Abut.	103+79.56	30.38	602.14	602.14
Back of East Abut.	103+80.89	30.38	602.13	602.13

BEAM #12

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	101+63.78	37.13	601.41	601.41
CL Brg. W. Abut.	101+65.11	37.13	601.43	601.43
A	101+75.11	37.13	601.58	601.61
B	101+85.11	37.13	601.73	601.78
C	101+95.11	37.13	601.85	601.92
D	102+05.11	37.13	601.97	602.03
E	102+15.11	37.13	602.08	602.12
F	102+25.11	37.13	602.17	602.19
CL W. Brg. Pier 1	102+30.36	37.13	602.21	602.21
CL E. Brg. Pier 1	102+31.86	37.13	602.22	602.22
G	102+41.86	37.13	602.30	602.35
H	102+51.86	37.13	602.35	602.46
I	102+61.86	37.13	602.40	602.53
J	102+71.86	37.13	602.43	602.58
K	102+81.86	37.13	602.46	602.59
L	102+91.86	37.13	602.46	602.56
M	103+01.86	37.13	602.46	602.51
CL W. Brg. Pier 2	103+10.36	37.13	602.45	602.45
CL E. Brg. Pier 2	103+11.86	37.13	602.45	602.45
N	103+21.86	37.13	602.42	602.45
O	103+31.86	37.13	602.38	602.43
P	103+41.86	37.13	602.32	602.39
Q	103+51.86	37.13	602.26	602.32
R	103+61.86	37.13	602.18	602.22
S	103+71.86	37.13	602.09	602.10
CL Brg. E. Abut.	103+77.11	37.13	602.03	602.03
Back of East Abut.	103+78.44	37.13	602.02	602.02

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-E 11-1-06

Bollinger, Lach & Associates, Inc.

TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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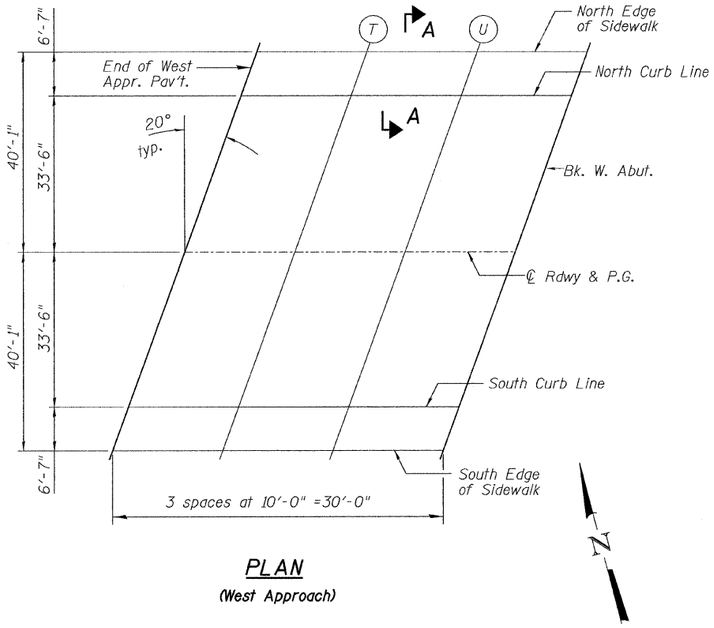
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

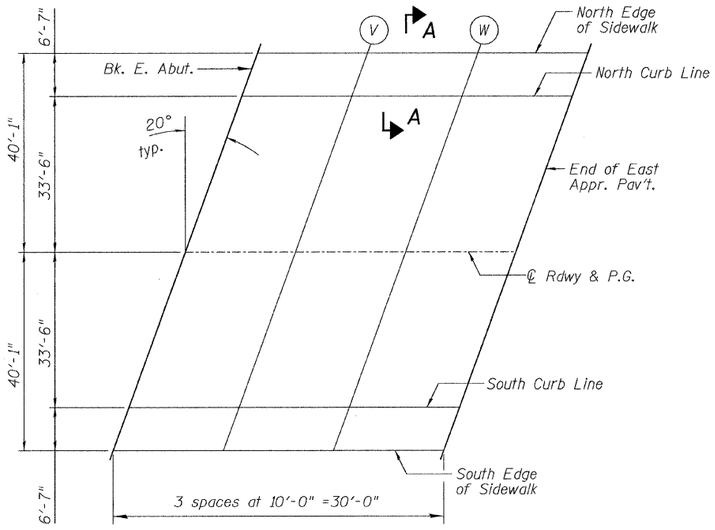
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	43
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
32 SHEETS

Contract # 60B98



PLAN
(West Approach)



PLAN
(East Approach)

NORTH EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pavt.	101+61.88	-40.08	601.67
T	101+71.88	-40.08	601.83
U	101+81.88	-40.08	601.97
Bk. of W. Abut.	101+91.88	-40.08	602.11

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pavt.	101+59.48	-33.50	601.41
T	101+69.48	-33.50	601.57
U	101+79.48	-33.50	601.72
Bk. of W. Abut.	101+89.48	-33.50	601.86

℄ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pavt.	101+47.29	0.00	601.86
T	101+57.29	0.00	602.04
U	101+67.29	0.00	602.21
Bk. of W. Abut.	101+77.29	0.00	602.36

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pavt.	101+35.10	33.50	600.96
T	101+45.10	33.50	601.15
U	101+55.10	33.50	601.33
Bk. of W. Abut.	101+65.10	33.50	601.50

SOUTH EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pavt.	101+32.70	40.08	601.13
T	101+42.70	40.08	601.33
U	101+52.70	40.08	601.51
Bk. of W. Abut.	101+62.70	40.08	601.68

WEST APPROACH

NORTH EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	104+06.54	-40.08	601.97
V	104+16.54	-40.08	601.82
W	104+26.54	-40.08	601.66
End E. Appr. Pavt.	104+36.54	-40.08	601.49

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	104+04.14	-33.50	601.78
V	104+14.14	-33.50	601.64
W	104+24.14	-33.50	601.48
End E. Appr. Pavt.	104+34.14	-33.50	601.31

℄ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	103+91.95	0.00	602.61
V	104+01.95	0.00	602.48
W	104+11.95	0.00	602.34
End E. Appr. Pavt.	104+21.95	0.00	602.19

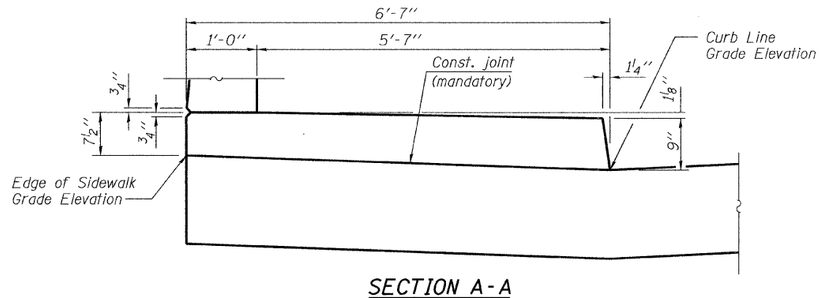
SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	103+79.76	33.50	602.08
V	103+89.76	33.50	601.97
W	103+99.76	33.50	601.84
End E. Appr. Pavt.	104+09.76	33.50	601.70

SOUTH EDGE OF SIDEWALK

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	103+77.36	40.08	602.32
V	103+87.36	40.08	602.21
W	103+97.36	40.08	602.09
End E. Appr. Pavt.	104+07.36	40.08	601.96

EAST APPROACH



SECTION A-A

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

BRIDGE APPROACH
TOP OF SLAB ELEVATIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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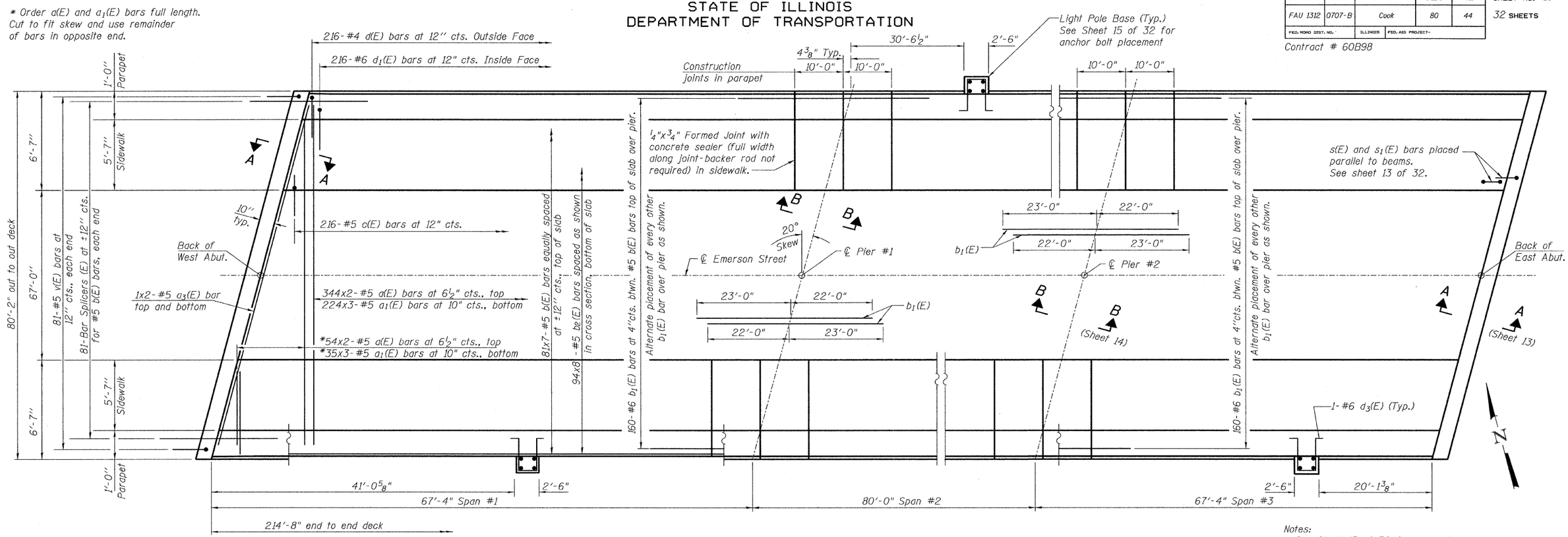
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	44
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
32 SHEETS

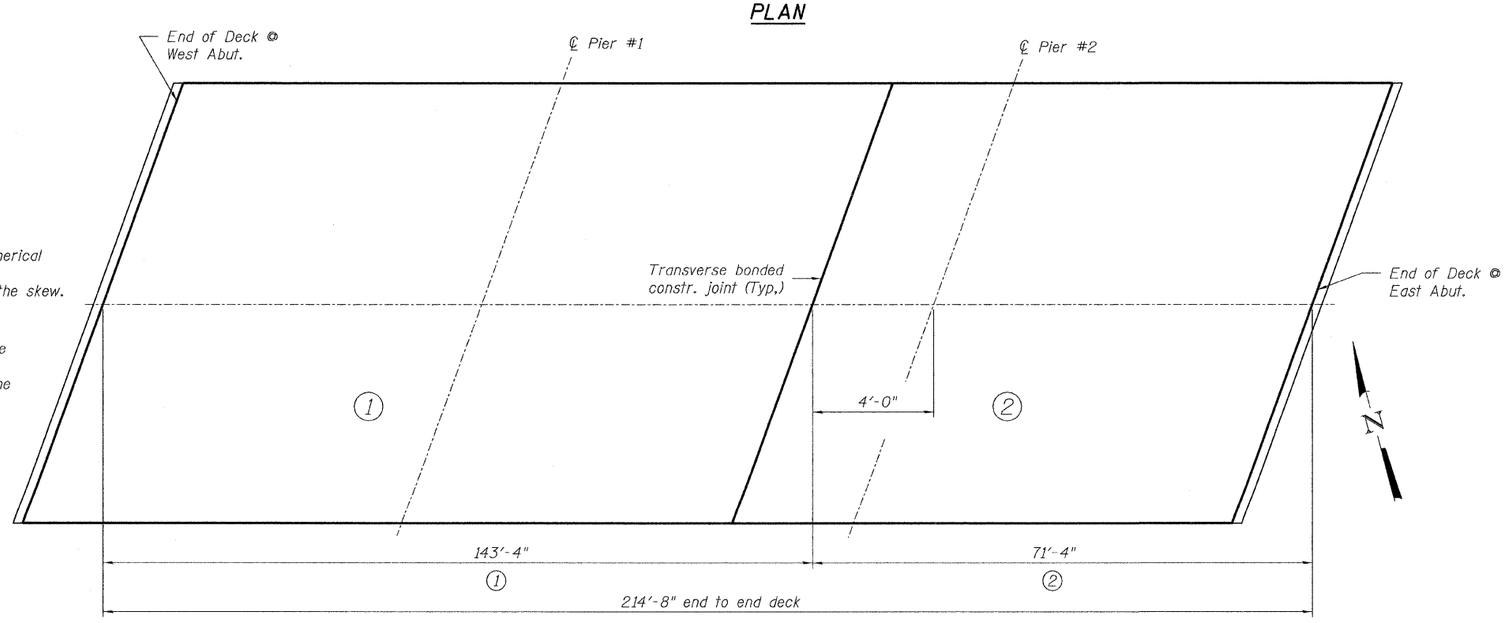
Contract # 60B98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* Order a(E) and a_1(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



PLAN



DECK POURING SEQUENCE

Notes:
Concrete deck slab segments shall be poured in numerical order as shown.
Transverse construction joint shall be parallel with the skew.
When the deck pour is stopped for the day at the transverse bonded construction joint in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:
1) At least 72 hours shall have elapsed from the end of the previous pour.
2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

Notes:
See Sheet 15 of 32 for superstructure details and Bill of Material.
Bars indicated thus 81 x 7-#5 etc. indicates 81 lines of bars with 7 lengths per line.
See Sheet 12 of 32 for parapet reinforcement.
For Section A-A, see sheet 13 of 32.
For Section B-B, see sheet 14 of 32.
Minimum Lap #5 bar = 1'-8"

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PII-2-L 11-1-06

Bollinger, Lach & Associates, Inc.

SUPERSTRUCTURE PLAN

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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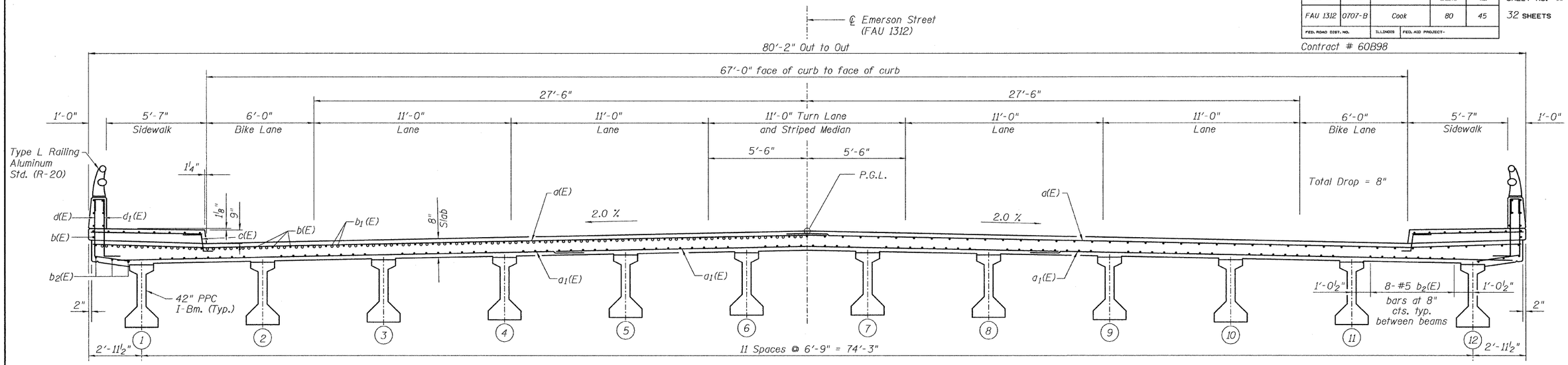
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	45
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

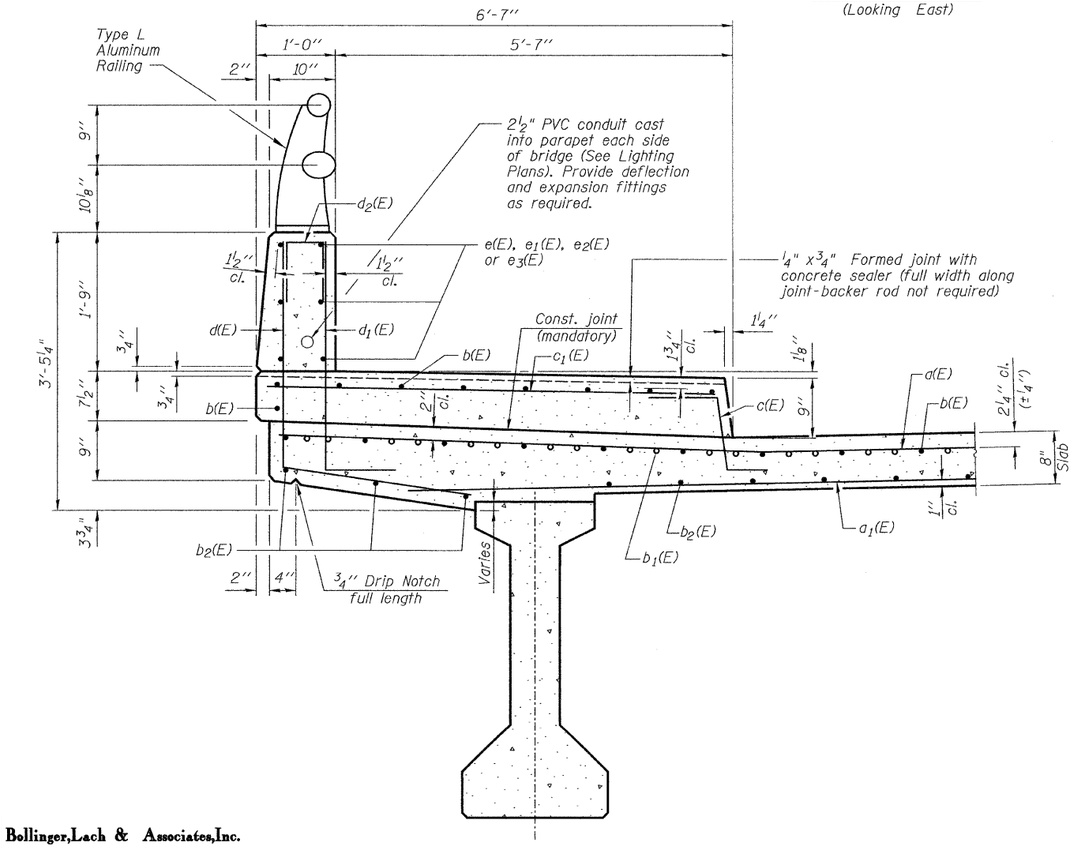
SHEET NO. 11
32 SHEETS

Contract # 60B98



NEAR PIER **NEAR MIDSPAN**

CROSS SECTION
(Looking East)



SECTION THRU SIDEWALK

Notes:
See Sheet 12 of 32 for parapet and sidewalk reinforcemnt.

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

SUPERSTRUCTURE CROSS SECTIONS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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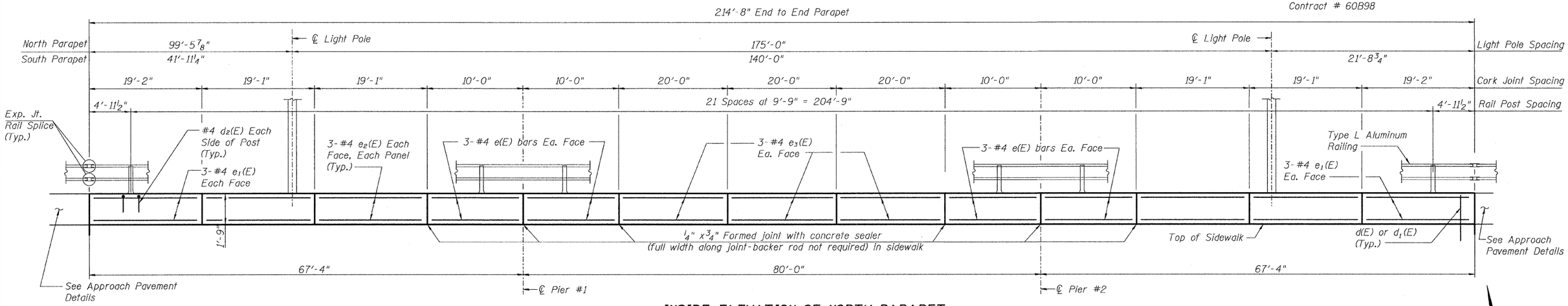
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	46
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

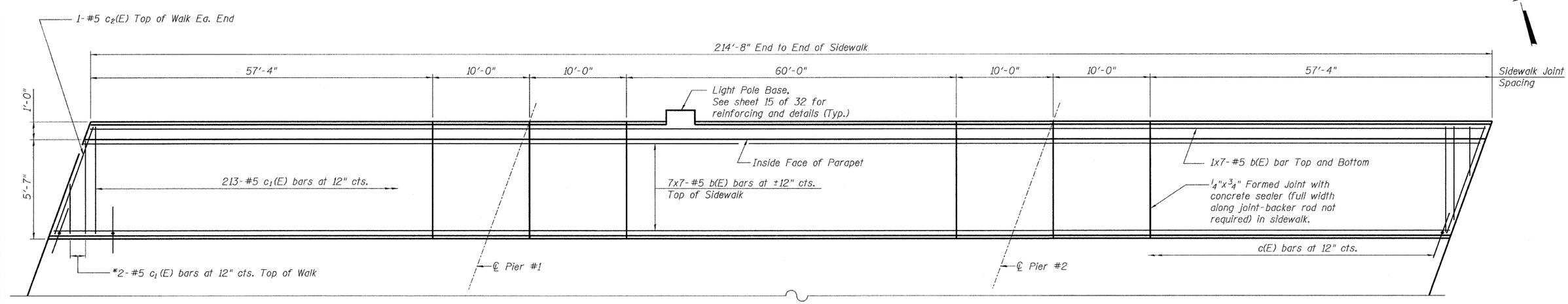
SHEET NO. 12
32 SHEETS

Contract # 60B98



INSIDE ELEVATION OF NORTH PARAPET

(Outside Elevation South Parapet)
(All dimensions measured along front face)



NORTH SIDEWALK PLAN

(South Sidewalk Similar)

* Order $c_1(E)$ bars full length.
Cut to fit skew and use remainder of bars in opposite end.

Notes:
Bars indicated thus 7x7-#5 etc. indicates 7 lines of bars with 7 lengths per line.
Minimum lap #5 bar = 1'-8"
See sheet 10 of 32 for light pole base locations.
See Lighting Plans for light pole details.

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

SIDEWALK PLAN & PARAPET ELEVATION

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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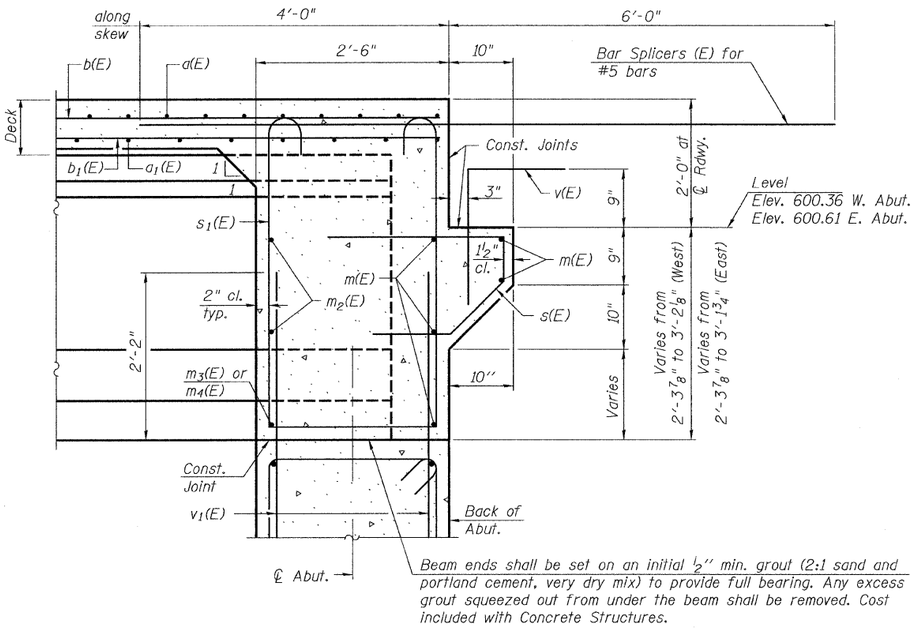
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	47
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 13
32 SHEETS

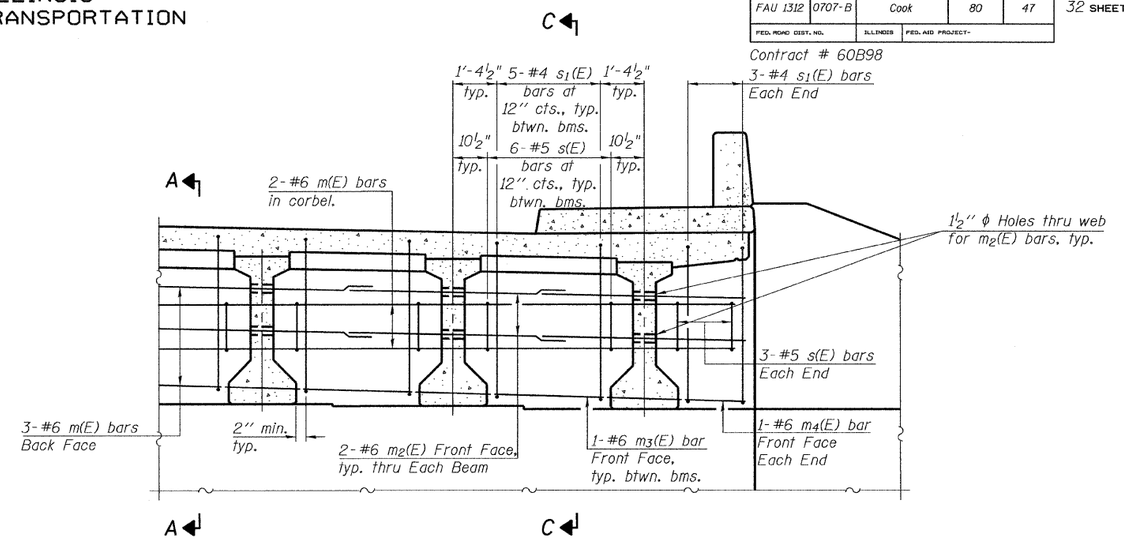
Contract # 60B98



Beam ends shall be set on an initial ½" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A

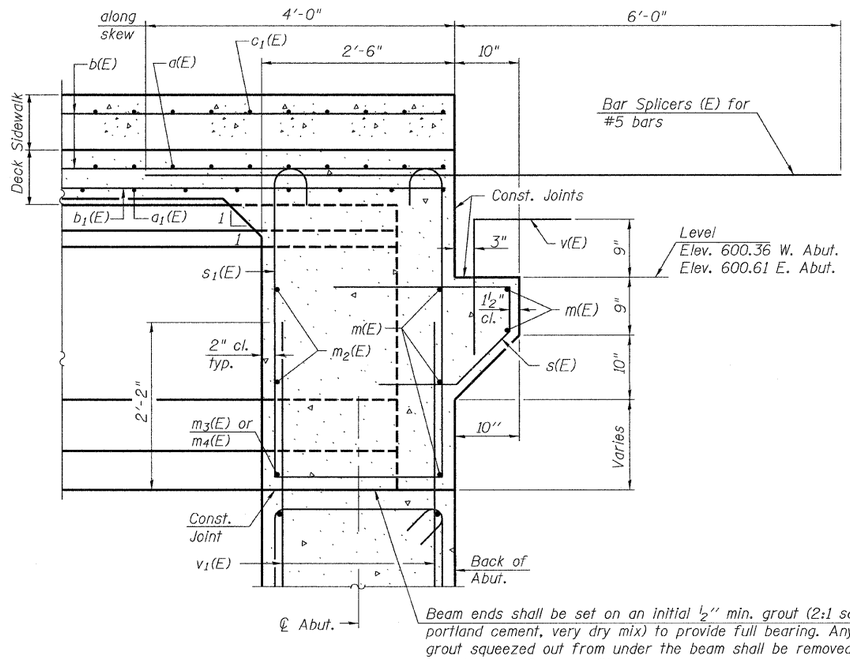
Dimensions at right angles to abutment, except as shown.



DIAPHRAGM ELEVATION AT ABUTMENT

MIN. BAR LAP

#6 bar = 2'-9"



Beam ends shall be set on an initial ½" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION C-C

(At Sidewalk)
Dimensions at right angles to abutment, except as shown.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 15 of 32.
Concrete in diaphragm is included with Concrete Superstructure on sheet 15 of 32.
For details of bars s(E) and s_1(E) see sheet 15 of 32.
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
See sheet 10 of 32 for location of Section A-A.

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-2DDI 11-1-06

Bollinger, Lach & Associates, Inc.

ABUTMENT DIAPHRAGM & DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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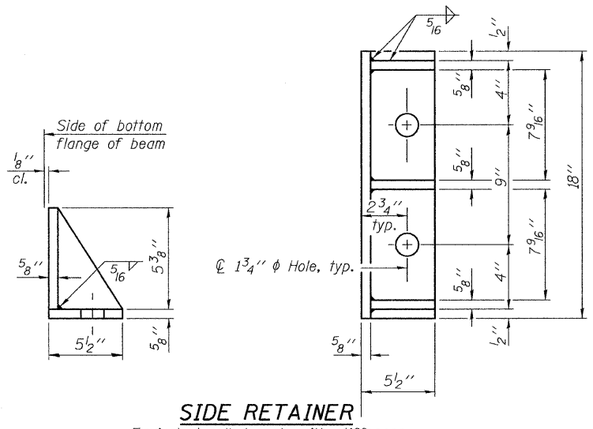
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	48
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 14
32 SHEETS

Contract # 60B98

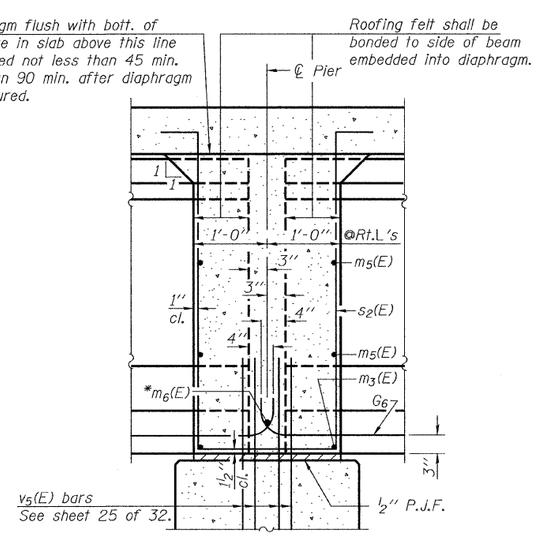


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.

Roofing felt shall be bonded to side of beam embedded into diaphragm.



SECTION B-B

Dimensions along ℄ of beam, except as shown.

* Tightly fasten the #8 bars together with No. 9 wire ties.

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 15 of 32.

Concrete in diaphragm is included with Concrete Superstructure on sheet 15 of 32.

For details of bar $s_2(E)$ see sheet 15 of 32.

See sheet 25 of 32 for anchor bolt location.

The $s_2(E)$ bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

Cost of 90 Lb. roofing felt is included with Concrete Superstructure.

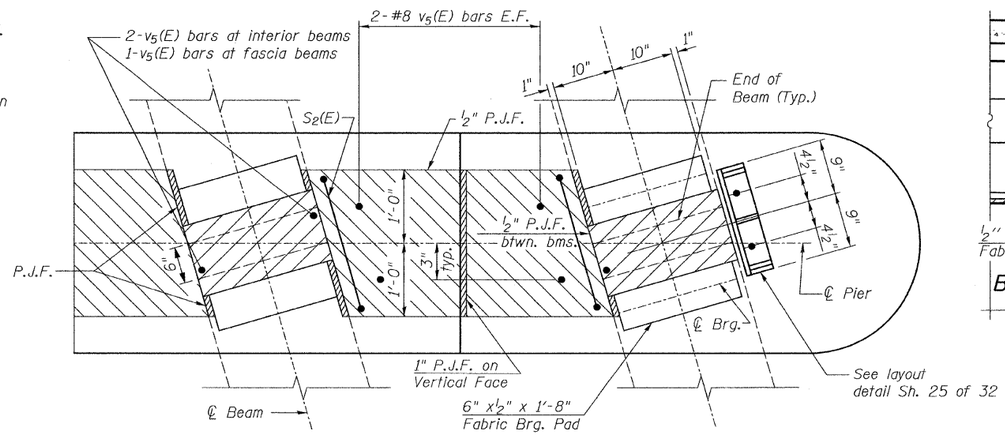
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111. Anchor bolts, plate washers and nuts shall be galvanized according to AASHTO M232. Cost of side retainer and anchor bolts shall be included with Concrete Structures.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

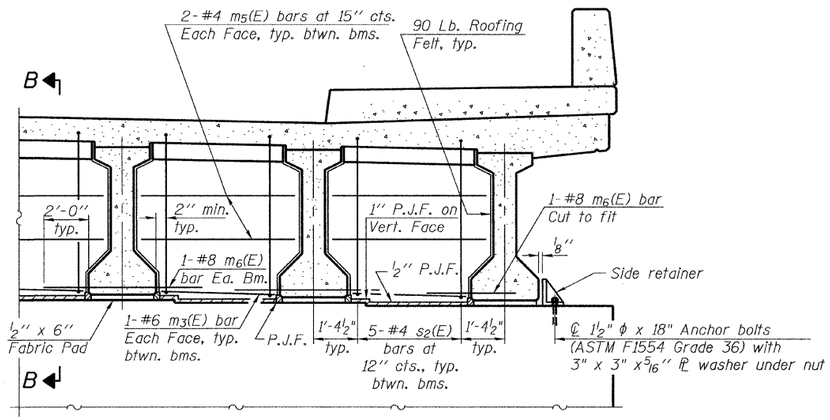
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

See sheet 10 of 32 for location of Section B-B.



PLAN AT PIER

(Showing bearing pad and PJF details)
See Sheets 23 & 24 of 32 for reinforcing details



DIAPHRAGM AT PIER

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

PI-2DI 11-1-06

Bollinger, Lach & Associates, Inc.

PIER DIAPHRAGM & DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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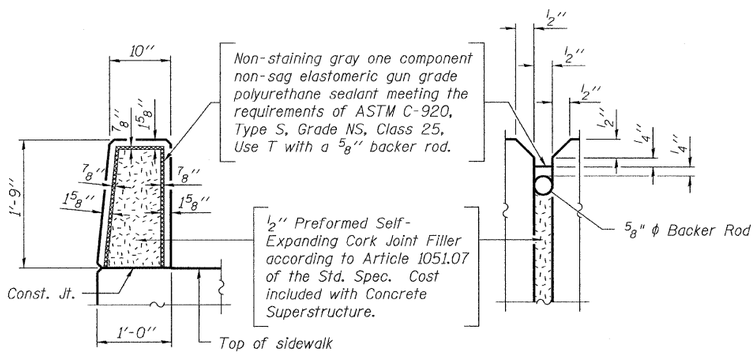
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

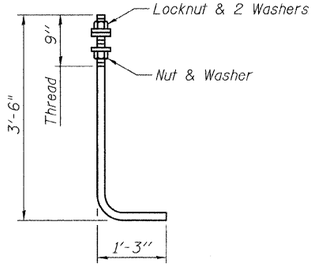
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	49
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
32 SHEETS

Contract # 60B98

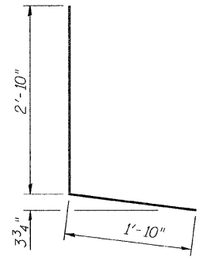


PARAPET JOINT DETAILS

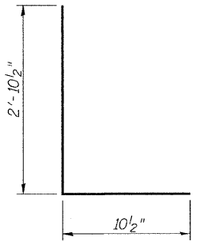


¾"ϕ ANCHOR ROD

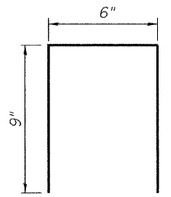
(ASTM F 1554 Grade 105)



BAR d(E)



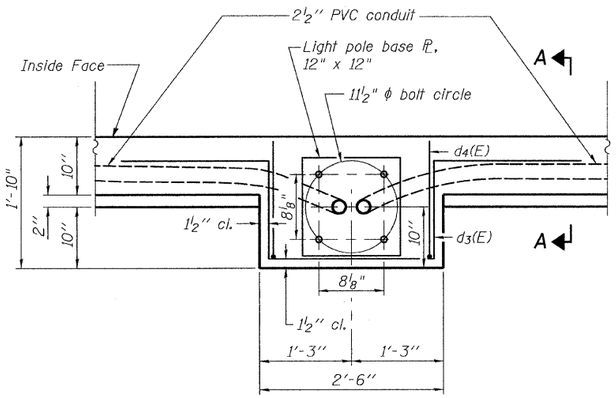
BAR d_1(E)



BAR d_2(E)

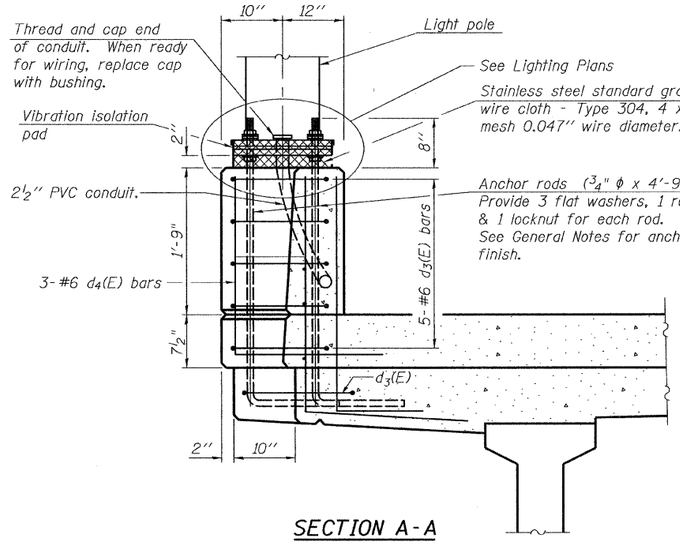
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	796	#5	40'-9"	——
d_1(E)	777	#5	27'-9"	——
d_2(E)	8	#5	43'-4"	——
b(E)	693	#5	32'-2"	——
b_1(E)	320	#6	45'-0"	——
b_2(E)	752	#5	28'-4"	——
c(E)	432	#5	2'-5"	⌒
c_1(E)	434	#5	6'-3"	——
c_2(E)	4	#5	6'-9"	——
d(E)	432	#4	4'-8"	L
d_1(E)	432	#6	3'-9"	L
d_2(E)	88	#4	2'-0"	⊓
d_3(E)	18	#6	9'-3"	⊔
d_4(E)	9	#6	4'-0"	L
e(E)	48	#4	9'-9"	——
e_1(E)	24	#4	18'-11"	——
e_2(E)	48	#4	18'-10"	——
e_3(E)	36	#4	19'-9"	——
m(E)	20	#6	44'-1"	——
m_2(E)	48	#6	11'-0"	——
m_3(E)	66	#6	4'-10"	——
m_4(E)	4	#6	4'-0"	——
m_5(E)	88	#4	4'-10"	——
m_6(E)	24	#8	5'-0"	——
s(E)	144	#5	6'-9"	⊐
s_1(E)	122	#4	11'-0"	⊔
s_2(E)	110	#4	10'-3"	⊔
v(E)	162	#5	3'-4"	⌐
Reinforcement Bars, Epoxy Coated		Lbs.	140,160	
Concrete Superstructure		Cu. Yds.	641.8	

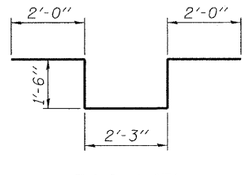


PLAN AT LIGHT POLE

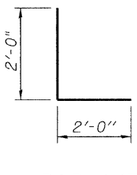
Note:
Cost of anchor rods and conduit is included with Concrete Superstructure.



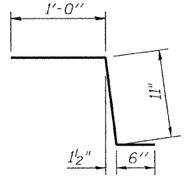
SECTION A-A



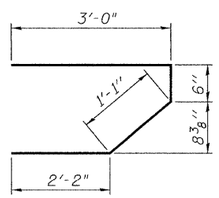
BAR d_3(E)



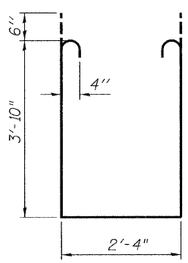
BAR d_4(E)



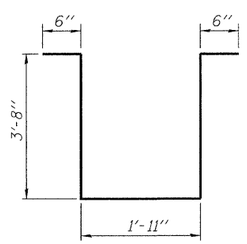
BAR c(E)



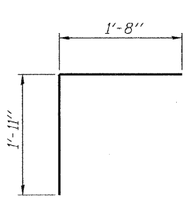
BAR s(E)



BAR s_1(E)



BAR s_2(E)



BAR v(E)

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

SUPER. BAR LIST, PARAPET JT. DETAILS, LIGHT POLE DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

W:\Emerson Street\Structural Dwg's\15-super bar list parapet jt detailslight pole details.dgn
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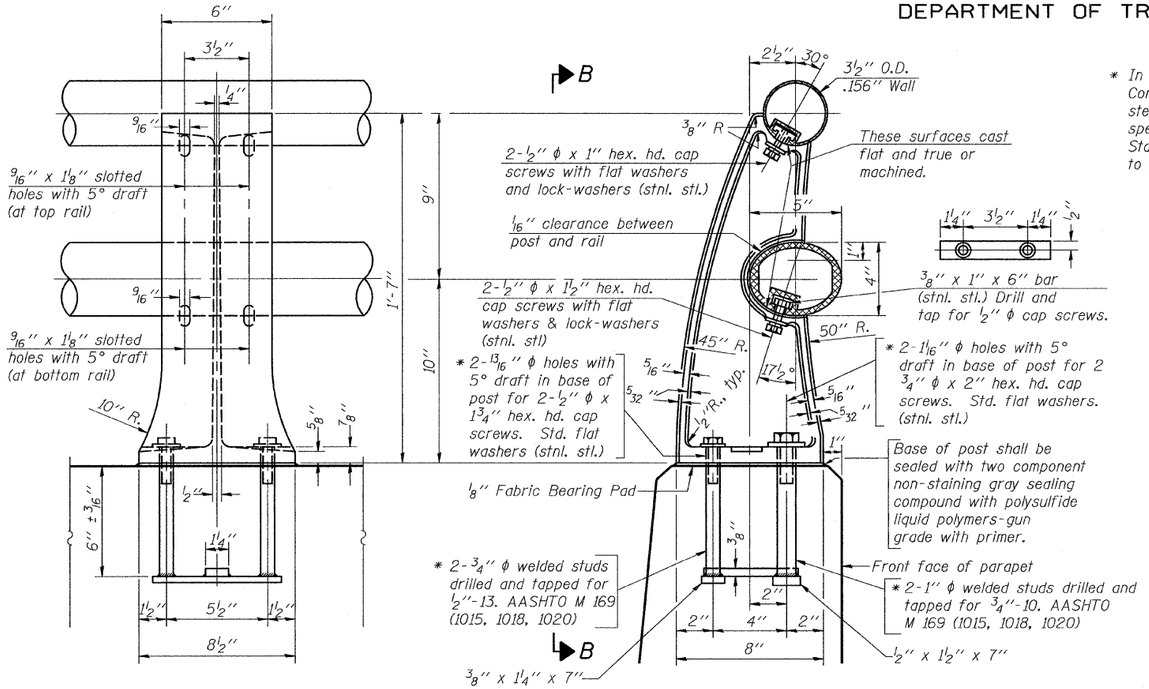
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

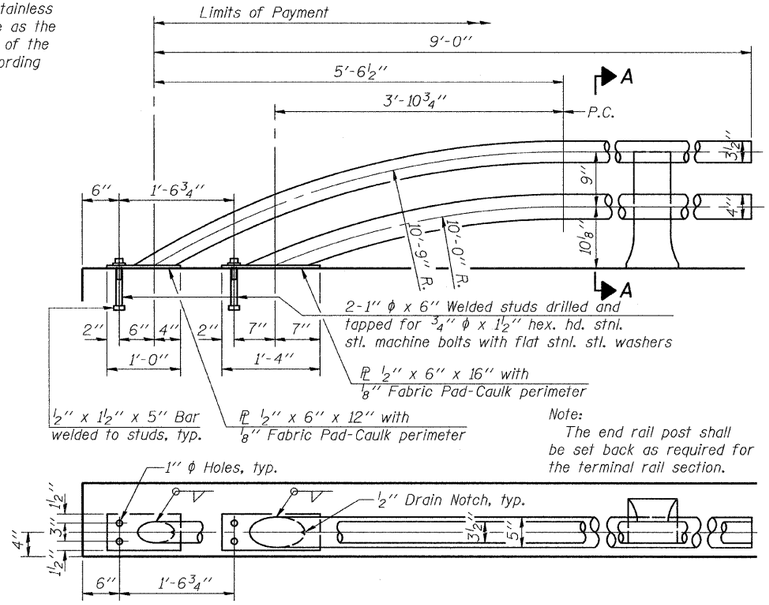
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	50
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
32 SHEETS

Contract # 60B98



* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



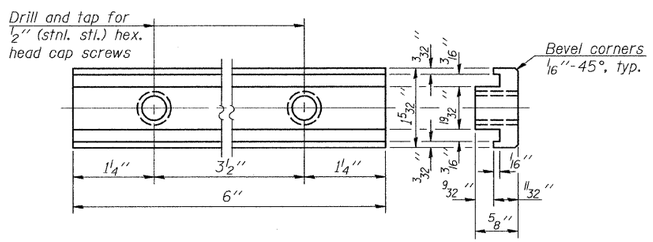
Note:
The end rail post shall be set back as required for the terminal rail section.

VIEW B-B

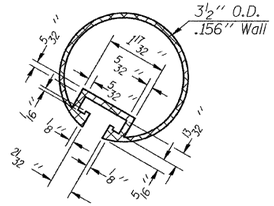
SECTION A-A

RAIL TERMINAL SECTION

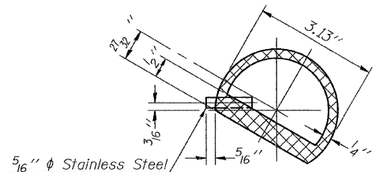
RAIL POST DETAILS



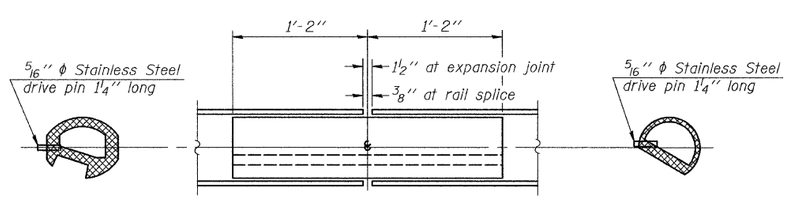
RAIL POST CLAMP BAR
For Top Rail



SECTION THRU TOP RAIL



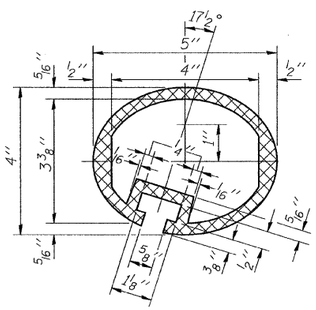
SECTION THRU SPLICE
For Top Rail



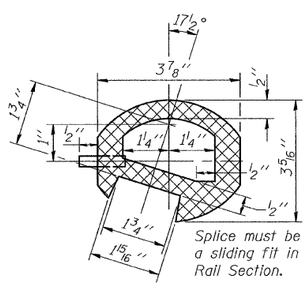
BOTTOM RAIL

TOP RAIL

RAIL SPLICE



SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
Provide 1-⅛″ and 2-1/16″ Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See sheet 12 & 32 of 32 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	490

(Quantity includes Bridge and Approach Pavement Railing)

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

R-20 11-1-06 (7′-0″ to 10′-0″ Post spacing)

ALUMINUM RAILING TYPE L (R-20)

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\16-aluminum railing type\(r-20).dgn
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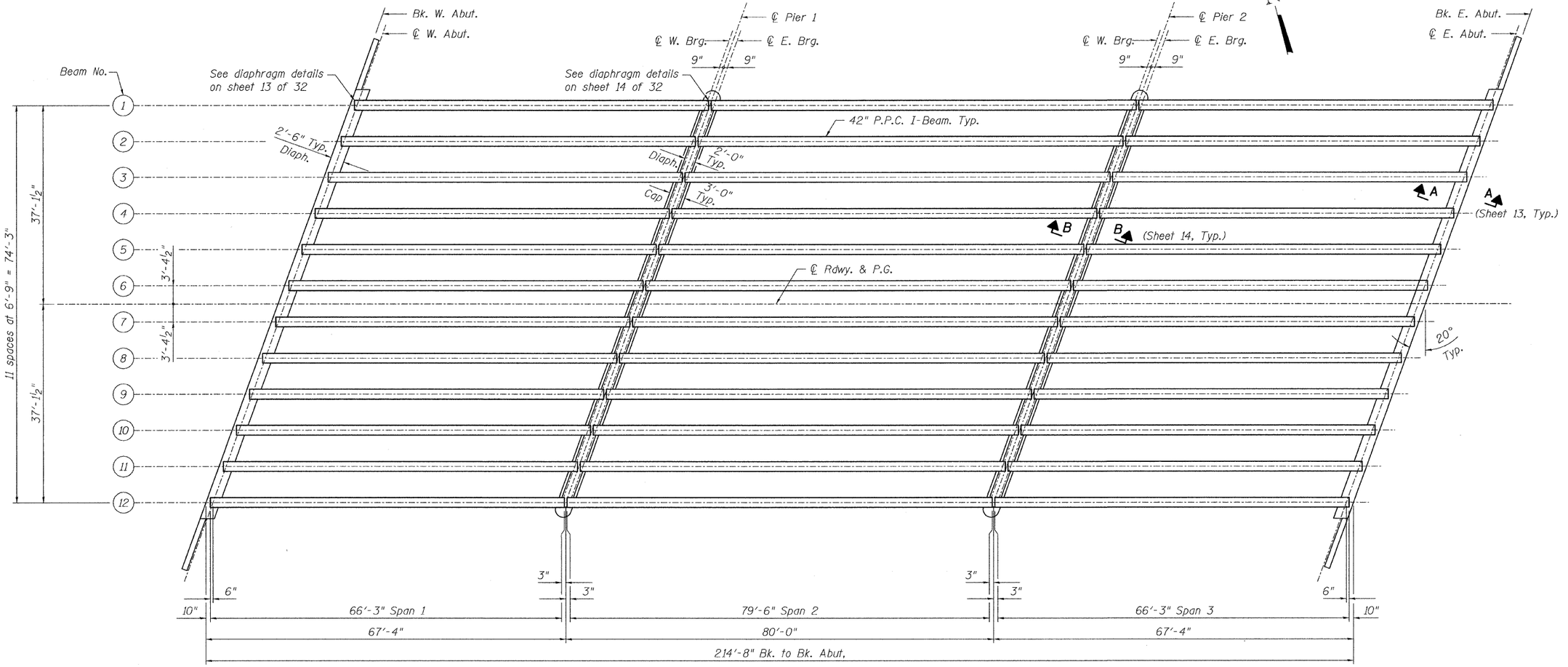
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	51
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 17
32 SHEETS

Contract # 60B98



FRAMING PLAN

INTERIOR BEAM REACTION TABLE HL93 Loading				
		Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R_{DC1}	(k)	38.7	38.7	47.0
* R_{DC2}	(k)	4.8	7.9	7.9
* R_{DW}	(k)	6.9	11.4	11.1
* $R_{℄ + Imp}$	(k)	70.9	81.5	82.5
R_{Total}	(k)	121.3	139.5	148.5

* The total R_{DC2}, R_{DW} and $R_{℄ + Imp}$ are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios.

INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in^4)	90956		90956
I'	(in^4)	299979		299979
S_b	(in^3)	5153		5153
S_b'	(in^3)	9148		9148
S_t	(in^3)	3736		3736
S_t'	(in^3)	32575		32575
$DC1$	(k/')	1.18		1.18
M_{DC1}	('k)	614.4		940.4
$DC2$	(k/')	0.19	0.19	0.19
M_{DC2}	('k)	60.1	103.1	51.9
DW	(k/')	0.28	0.28	0.28
M_{DW}	('k)	86.5	148.1	74.8
$M_{℄ + Imp}$	('k)	827.0	830.3	824.3

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
$DC1$: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
$DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
$M_{℄ + Imp}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

FRAMING PLAN

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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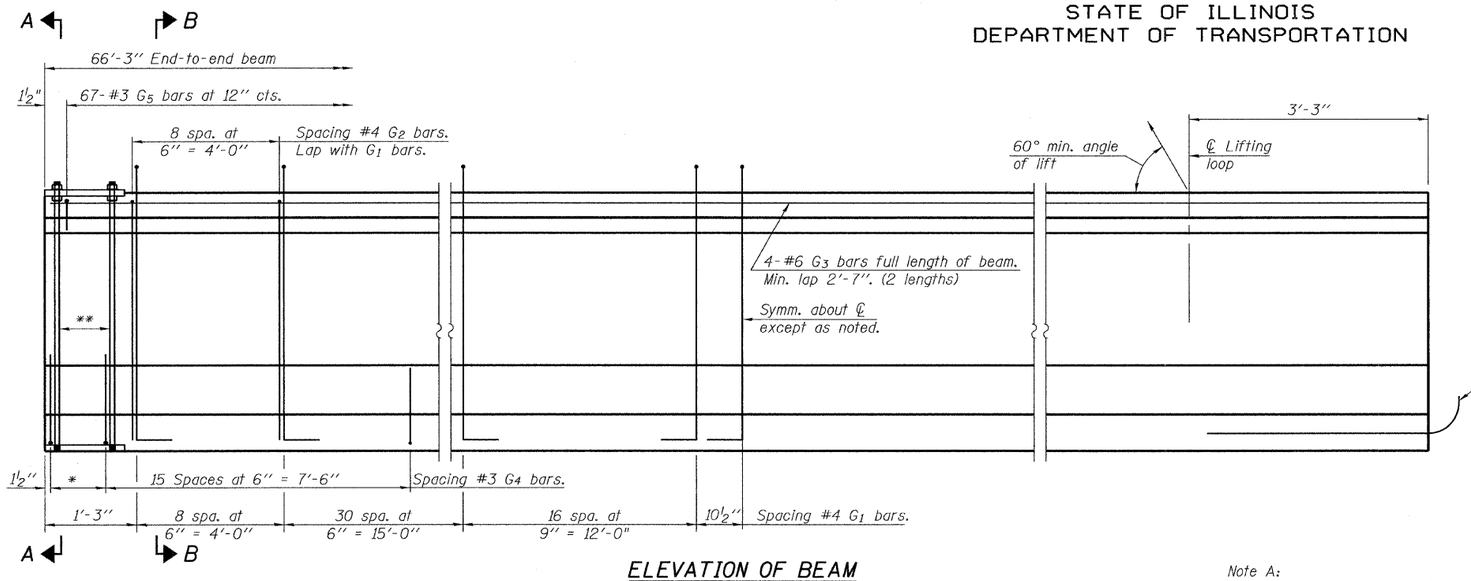
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	52
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

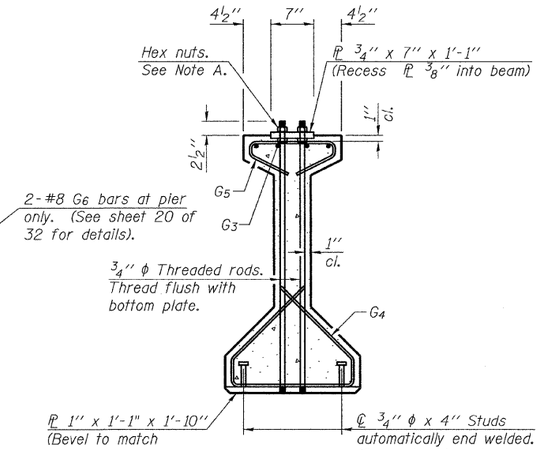
SHEET NO. 18
32 SHEETS

Contract # 60B98

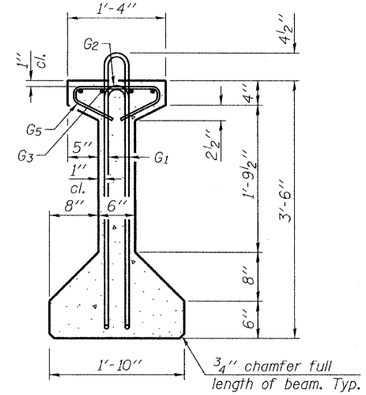


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., each face.

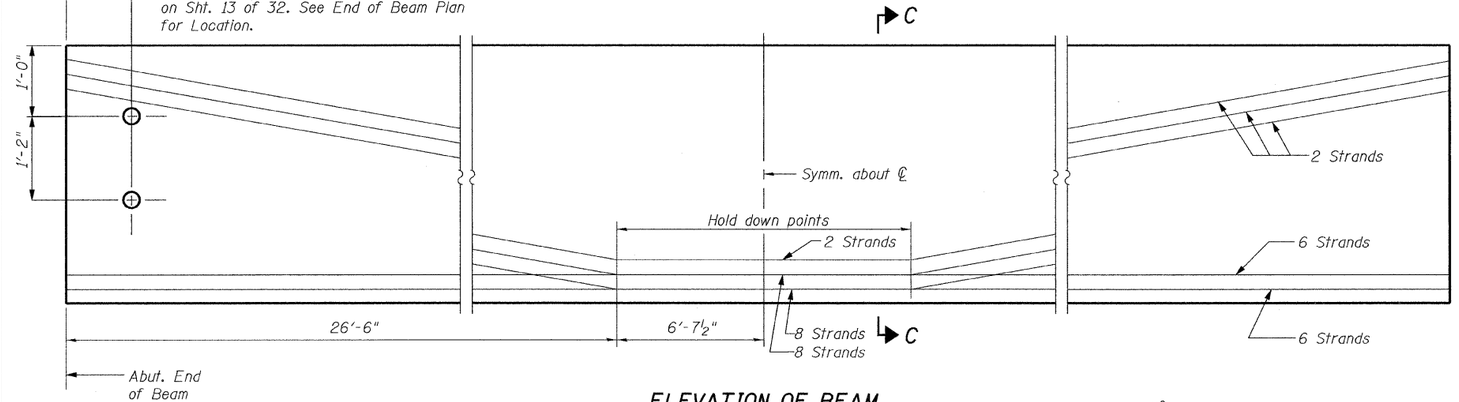


SECTION A-A

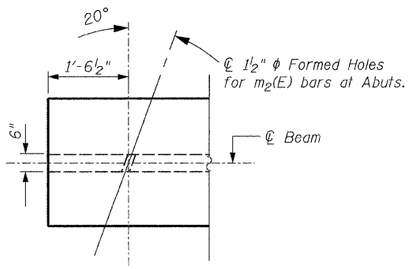


SECTION B-B

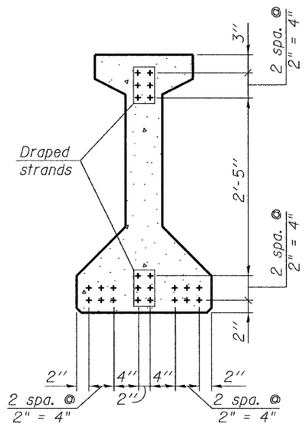
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



ELEVATION OF BEAM
(Showing prestressing steel)



END OF BEAM - PLAN



SECTION C-C

*** BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	111	#4	8'-5"	
G_2	18	#4	6'-8"	
G_3	8	#6	34'-5"	
G_4	38	#3	4'-11"	
G_5	67	#3	2'-6"	
G_6	2	#8	3'-9"	

*** For information only

Notes:
See sheet 20 of 32 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5000 psi.

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

PI-4-42 12-21-06

Bollinger, Lach & Associates, Inc.

42" PPC I-BEAM (SPANS 1 & 3)

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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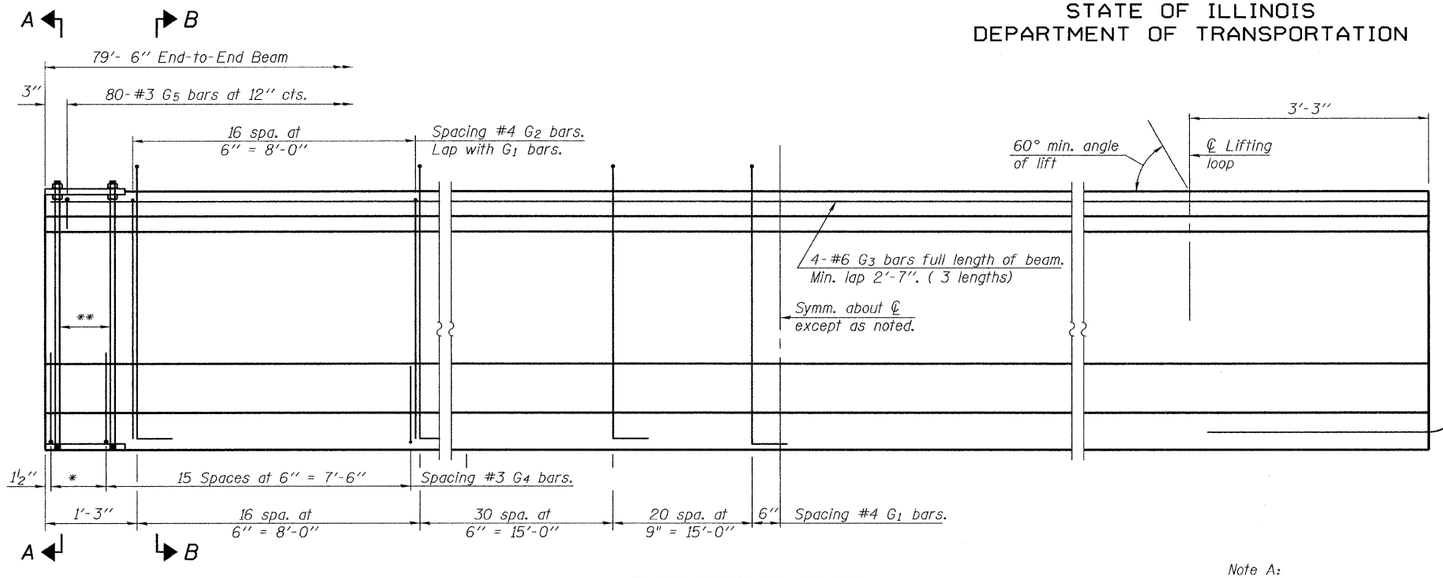
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	53
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

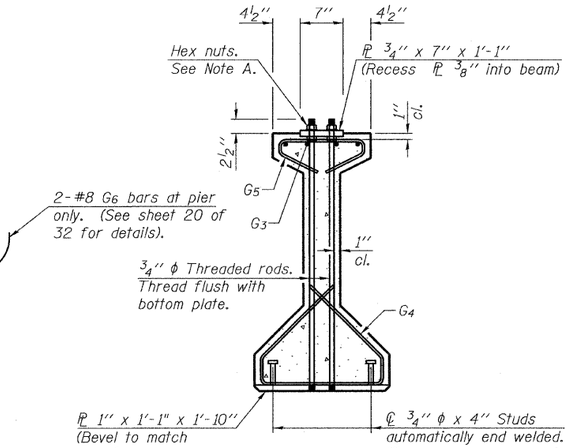
SHEET NO. 19
32 SHEETS

Contract # 60B98

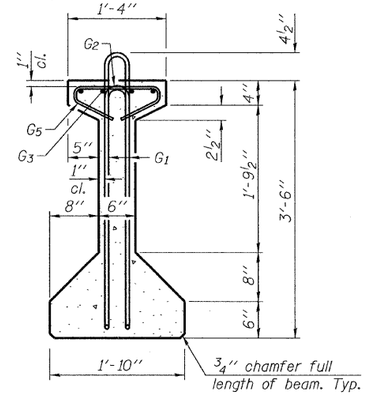


* 3 spaces at 3" = 9".
** 4-¾" ϕ threaded dowel rods at 3" cts., each face.

ELEVATION OF BEAM
(Showing reinforcement & dimensions)

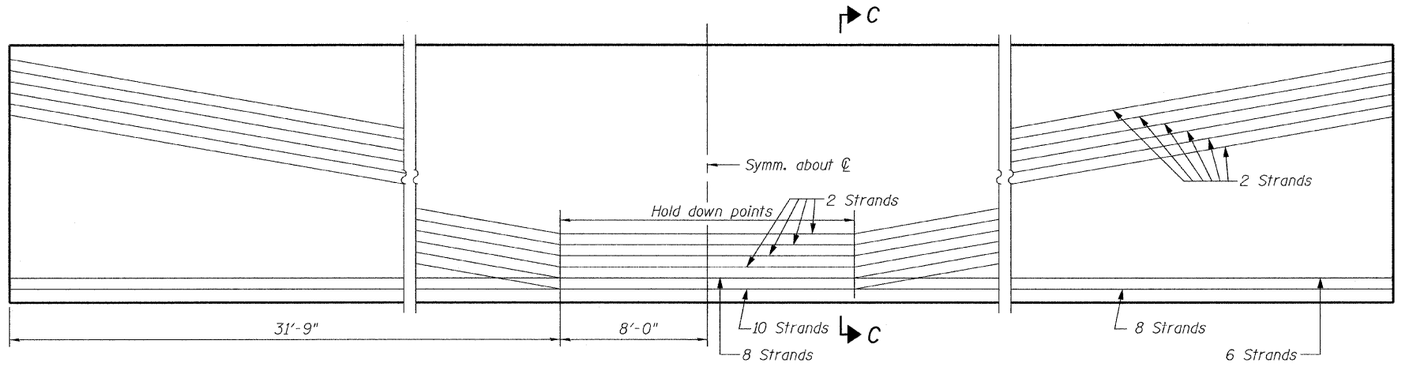


SECTION A-A

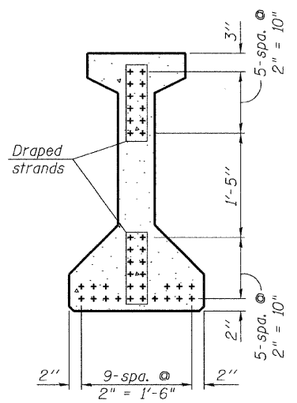


SECTION B-B

Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION C-C

*** BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	134	#4	8'-5"	
G_2	34	#4	6'-8"	
G_3	12	#6	28'-3"	
G_4	38	#3	4'-11"	
G_5	80	#3	2'-6"	
G_6	4	#8	3'-9"	

*** For information only

Notes:
See sheet 20 of 32 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5000 psi.

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

PI-4-42 12-21-06

42" PPC I-BEAM (SPAN 2)

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\19-42 ppc i-beam (80').dgn
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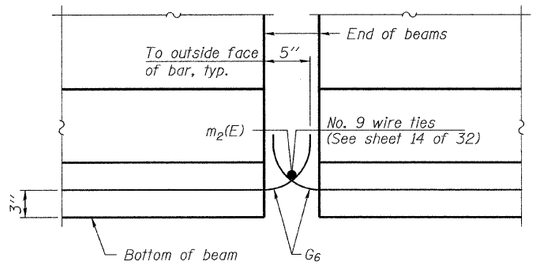
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

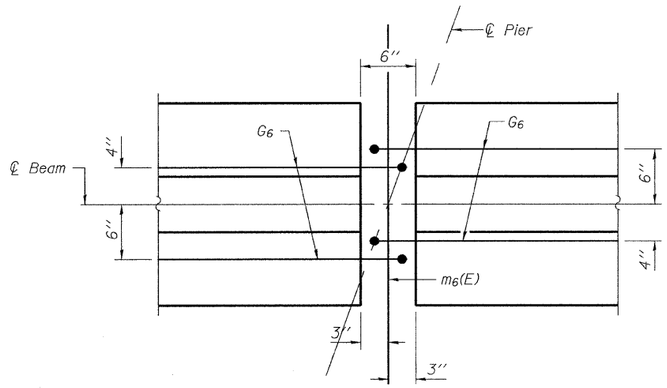
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	54
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 20
32 SHEETS

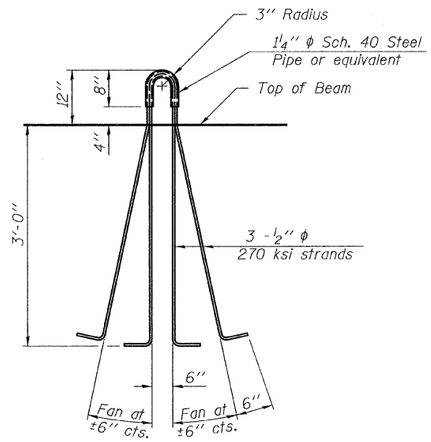
Contract # 60B98



ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER



LIFTING LOOP DETAIL

NOTES

Inserts for ¾" ϕ threaded dowel rods, when specified, are to be two strut, coil type for interior beams and single coil, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60.

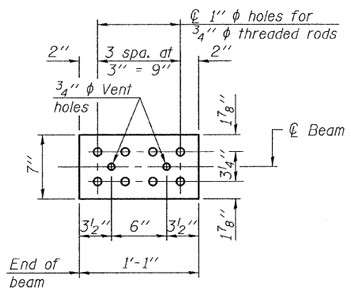
A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Cut G_6 bars when necessary to maintain 1½" clearance.

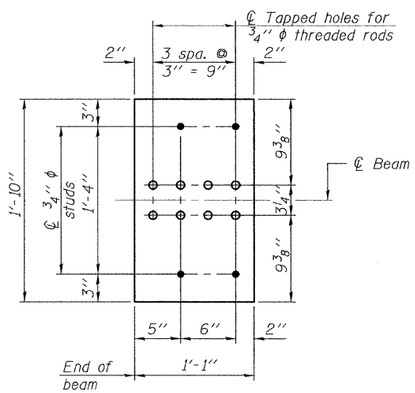
The bottom plates and studs shall be galvanized according to AASHTO M111.

Threaded rods shall be ASTM F 1554 Grade 55.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to all portions of the I-beam or Bulb-T beam, except the top surface of the top flange and the bottom surface of the bottom flange, starting at each beam end and extending out a distance of 42 inches. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

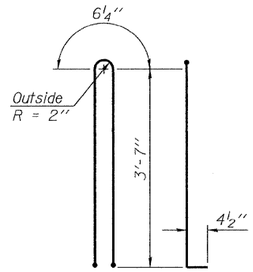


TOP PLATE

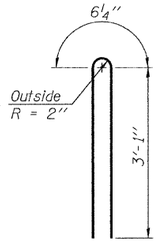


BOTTOM PLATE

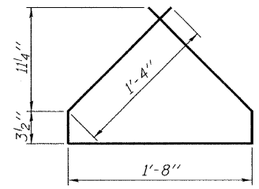
~~See bearing details for pintle hole locations when required.~~



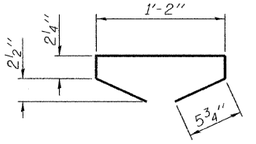
BAR G1



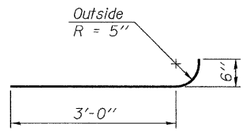
BAR G2



BAR G4



BAR G5



BAR G6

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Ft.	2544

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

PI-4-42D

12-21-06

42" PPC I-BEAM DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\20-42 ppc i-beam details.dgn
10/16/2007 10:08:06 AM

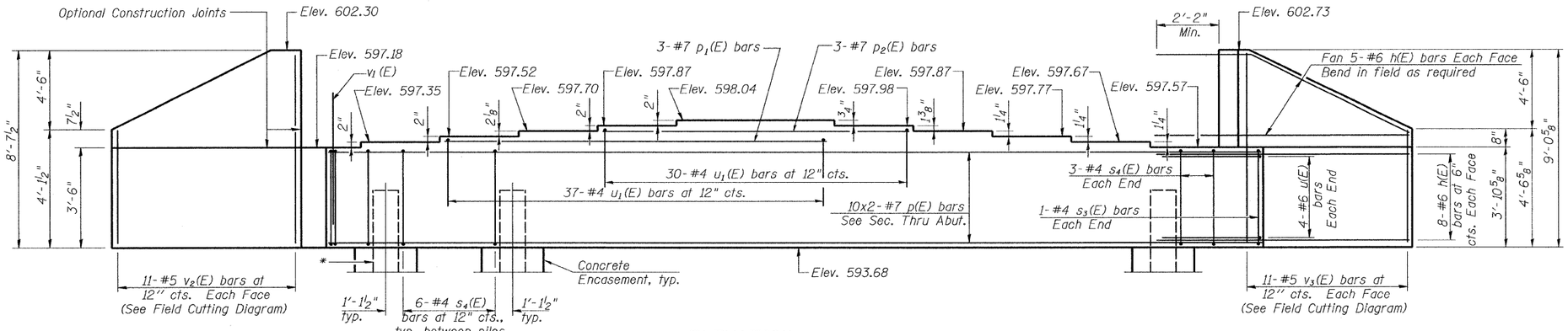
Notes: Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

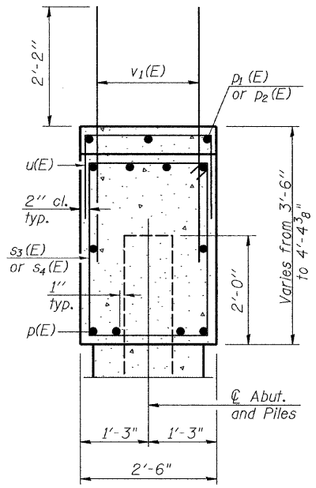
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707B	Cook	80	55
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 21
32 SHEETS

Contract # 60B98

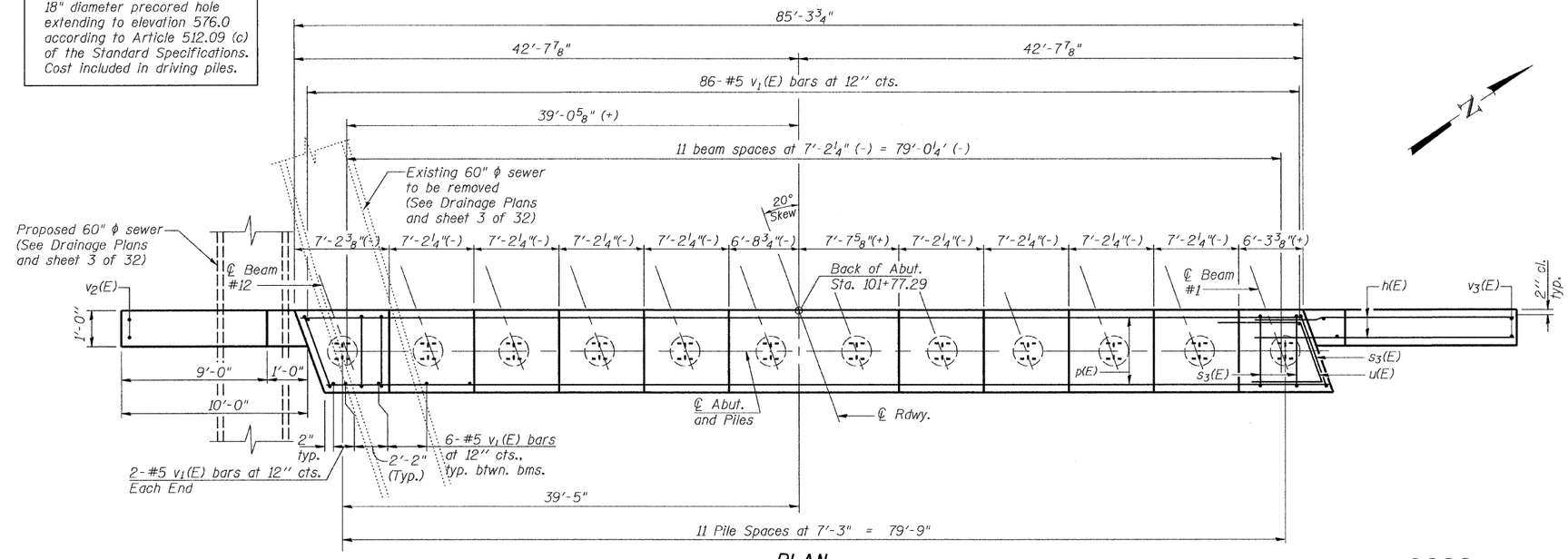


ELEVATION



SEC. THRU ABUT.

* Precore pile location adjacent to proposed 60" ϕ sewer. Pile shall be driven through an 18" diameter precored hole extending to elevation 576.0 according to Article 512.09 (c) of the Standard Specifications. Cost included in driving piles.



PLAN

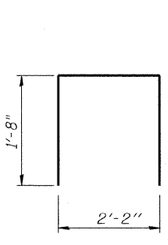
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	52	#6	13'-2"	
p(E)	20	#7	44'-6"	
p1(E)	3	#7	35'-9"	
p2(E)	3	#7	28'-6"	
s3(E)	2	#4	11'-9"	
s4(E)	72	#4	11'-5"	
u(E)	8	#6	8'-0"	
u1(E)	67	#4	5'-6"	
v1(E)	156	#5	4'-4"	
v2(E)	11	#5	12'-2"	
v3(E)	11	#5	13'-0"	
Structure Excavation		Cu. Yd.	185	
Concrete Structures		Cu. Yd.	36.6	
Reinforcement Bars, Epoxy Coated		Pound	5150	
Furnishing-Steel Piles, HP 14x89		Foot	1045	
Driving Piles		Foot	1045	
Test Pile, HP 14x89		Each	1	
Concrete Encasement		Cu. Yd.	6.7	
Pile Shoes		Each	12	

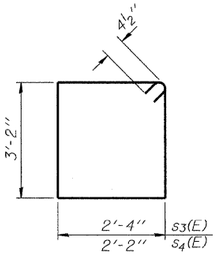
For details of piles and Concrete Encasement, see sheet 26 of 32.
Bars indicated thus 9x2 - #7 etc. indicates 9 lines of bars with 2 lengths per line.
Minimum lap #7 bar = 3'-10".

PILE DATA

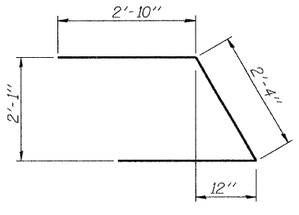
Type: Steel HP 14x89
Nominal Required Bearing: 705 kips
Factored Resistance Available: 235 kips
Est. Length: 95 feet
No. Production Piles: 11
No. Test Piles: 1



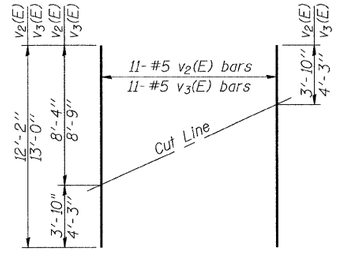
BAR u1(E)



BARS s3(E) & s4(E)



BAR u(E)



FIELD CUTTING DIAGRAM

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

WEST ABUTMENT

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

AI-L 11-1-06

w:\emerson street\structural dwg's\21-west abutment-plan & elev sect.dgn
10/16/2007 10:08:08 AM

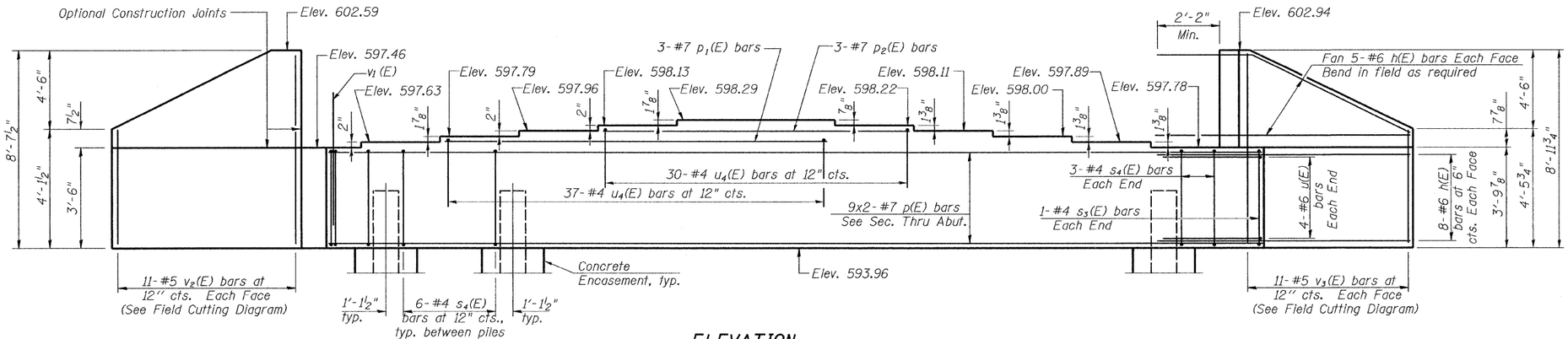
Notes: Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

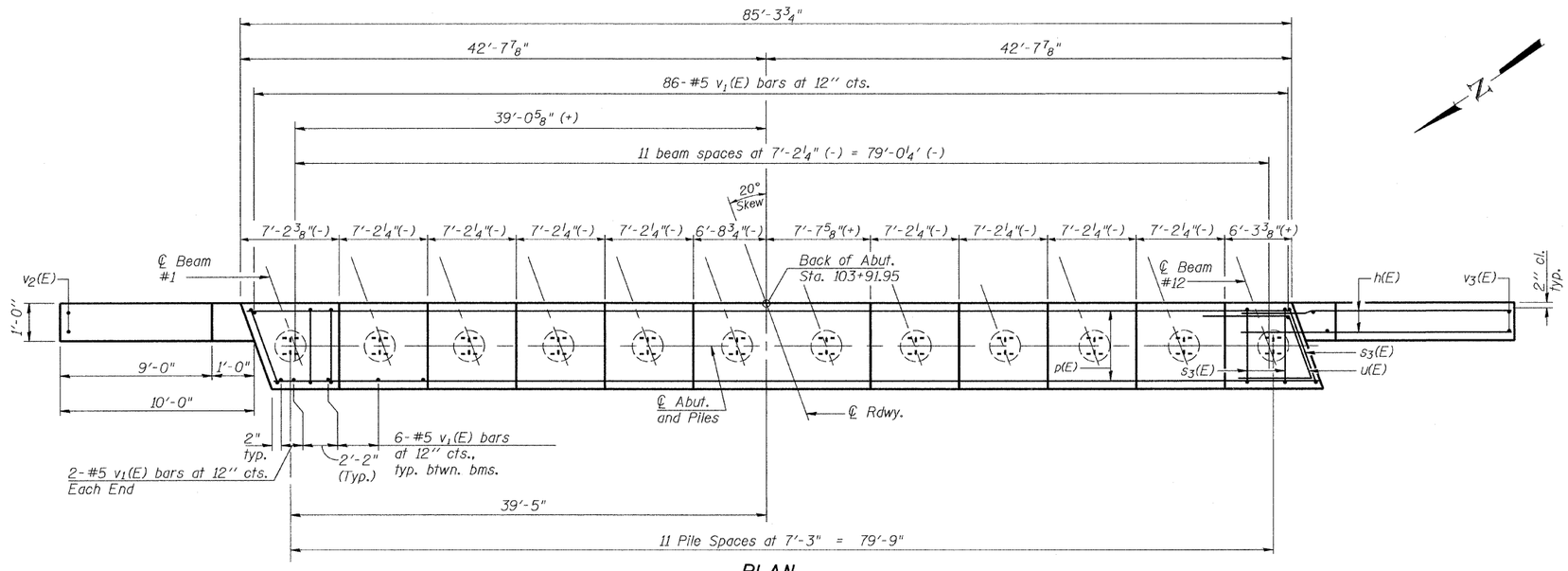
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	56
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
32 SHEETS

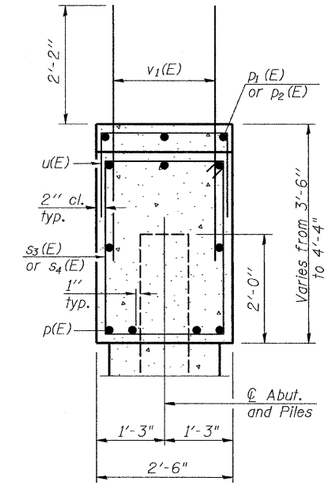
Contract # 60B98



ELEVATION



PLAN



SEC. THRU ABUT.

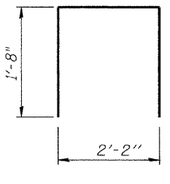
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	52	#6	13'-2"	
p(E)	18	#7	44'-6"	
p1(E)	3	#7	35'-9"	
p2(E)	3	#7	28'-6"	
s3(E)	2	#4	11'-9"	
s4(E)	72	#4	11'-5"	
u(E)	8	#6	8'-0"	
u1(E)	67	#4	5'-6"	
v1(E)	156	#5	4'-4"	
v2(E)	11	#5	12'-2"	
v3(E)	11	#5	13'-0"	
Structure Excavation		Cu. Yd.	97	
Concrete Structures		Cu. Yd.	36.2	
Reinforcement Bars, Epoxy Coated		Pound	5150	
Furnishing-Steel Piles, HP 14x89		Foot	1045	
Driving Piles		Foot	1045	
Test Pile, HP 14x89		Each	1	
Concrete Encasement		Cu. Yd.	6.7	
Pile Shoes		Each	12	

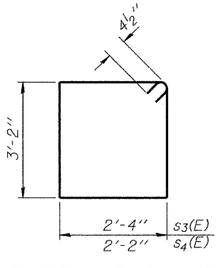
For details of piles and Concrete Encasement, see sheet 26 of 32.
Bars indicated thus 9x2 - #7 etc. indicates 9 lines of bars with 2 lengths per line.
Minimum lap #7 bar = 3'-10".

PILE DATA

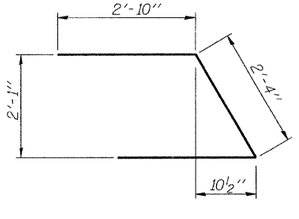
Type: Steel HP 14x89
Nominal Required Bearing: 705 kips
Factored Resistance Available: 235 kips
Est. Length: 95 feet
No. Production Piles: 11
No. Test Piles: 1



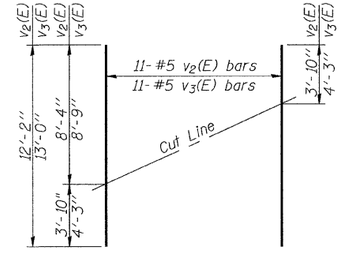
BAR u1(E)



BARS s3(E) & s4(E)



BAR u(E)



FIELD CUTTING DIAGRAM

Order v2(E) and v3(E) full length. Cut as shown and use remainder of bars in opposite face.

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

AI-L 11-1-06

EAST ABUTMENT

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\22-east abutment-plan & elev sect.dgn
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Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 26 of 32.
For Anchor Bolt Layout, see sheet 25 of 32.
Bars indicated thus 27 x 2-#5 etc. indicates 27 lines of bars with 2 lengths per line.
Minimum Lap #5 bar = 2'-5"
Minimum Lap #7 bar = 3'-10"
For Bill of Material see sheet 25 of 32.

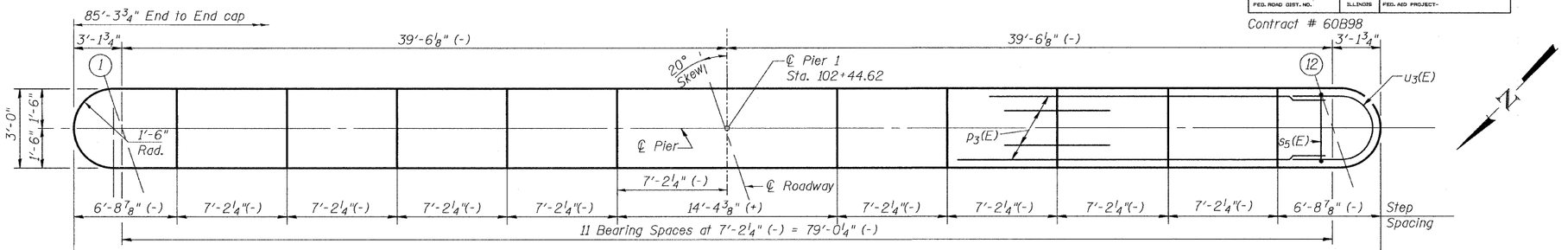
PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 705 kips
Factored Resistance Available: 235 kips
Est. Length: 96 feet
No. Production Piles: 18
No. Test Piles: 1

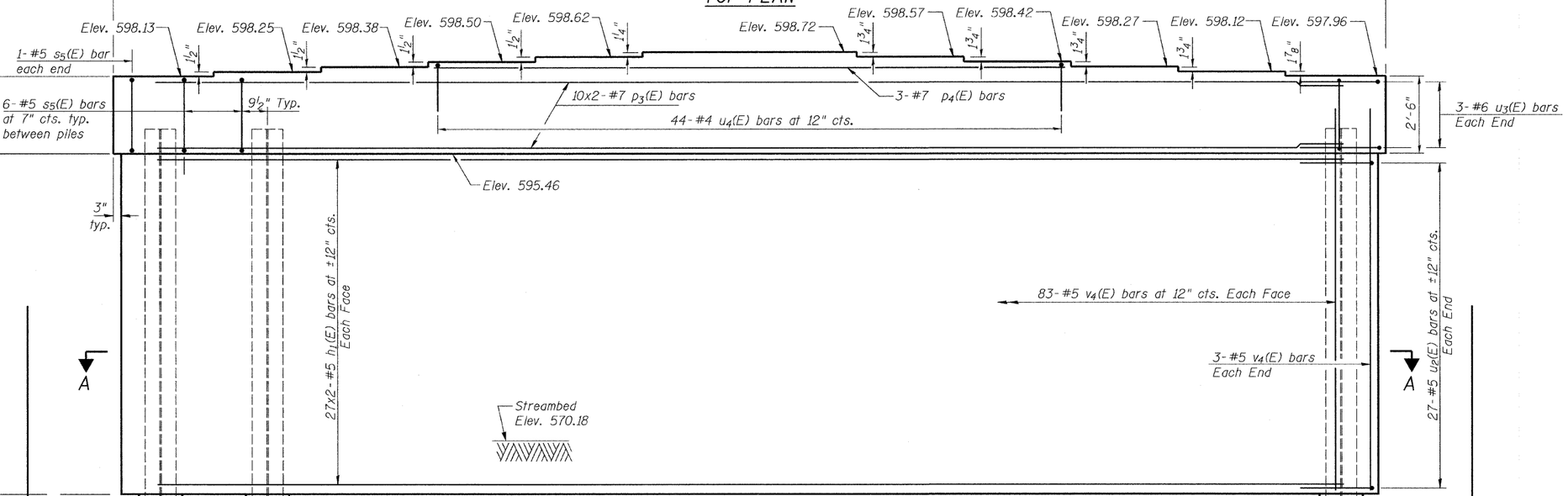
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

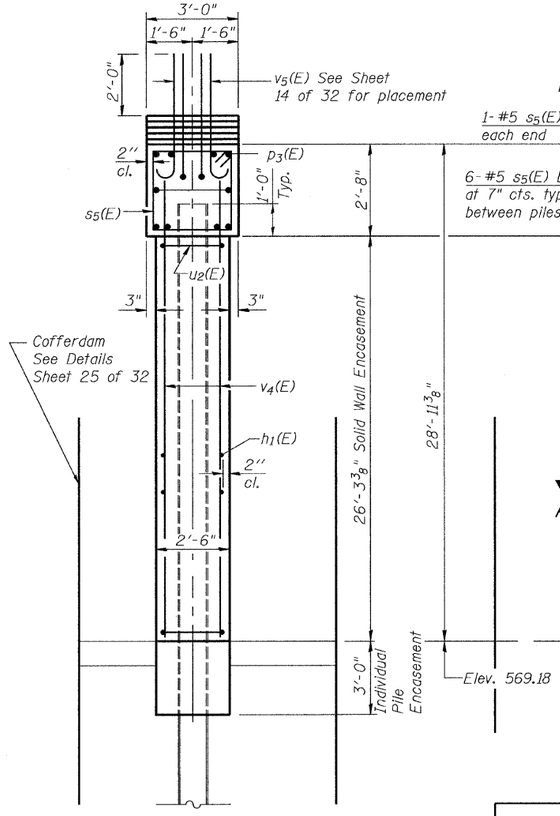
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	57
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
32 SHEETS
Contract # 60B98



TOP PLAN



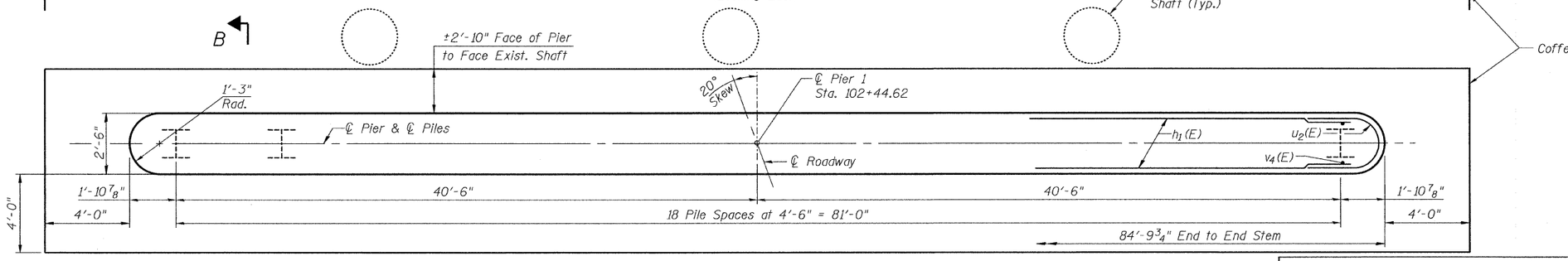


END VIEW

A

A

ELEVATION
(Looking East)



B

(Sheet 25 of 32)

B

SECTION A-A

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

PC-1 11-1-06

Bollinger, Lach & Associates, Inc.

PIER 1

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\23-pier 1.dgn
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Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 26 of 32.
For Anchor Bolt Layout, see sheet 25 of 32.
Bars indicated thus 27 x 2-#5 etc. indicates 27 lines of bars with 2 lengths per line.
Minimum Lap #5 bar = 2'-5"
Minimum Lap #7 bar = 3'-10"
For Bill of Material see sheet 25 of 32.

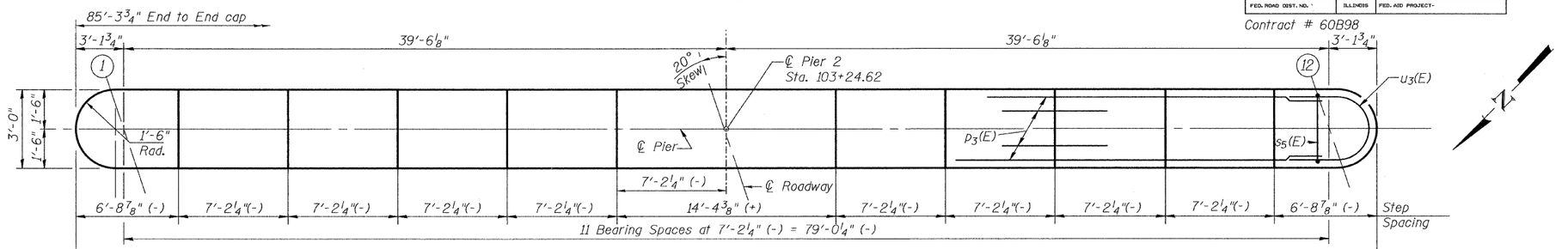
PILE DATA

Type: Steel HP 14x89
Nominal Required Bearing: 705 kips
Factored Resistance Available: 235 kips
Est. Length: 96 feet
No. Production Piles: 18
No. Test Piles: 1

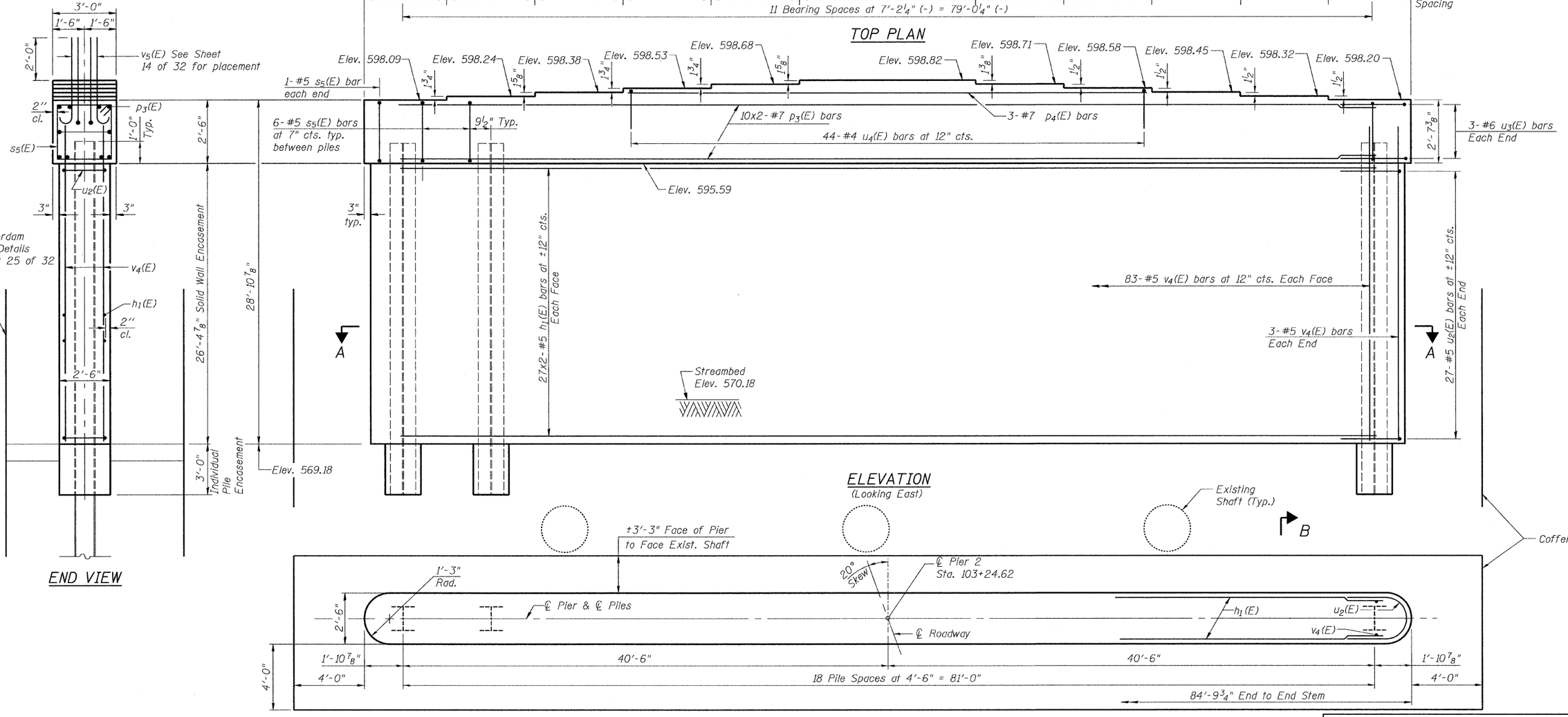
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

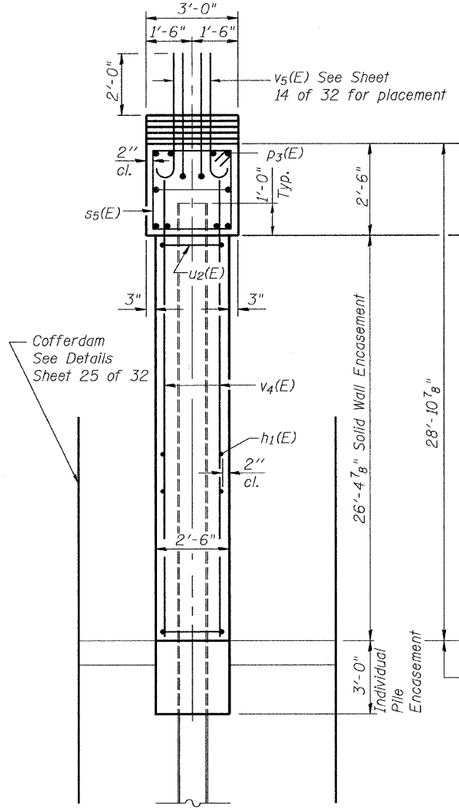
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	58
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
32 SHEETS
Contract # 60B98



TOP PLAN





END VIEW

ELEVATION
(Looking East)

SECTION A-A

B
(Sheet 25 of 32)

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

PC-1 11-1-06

PIER 2

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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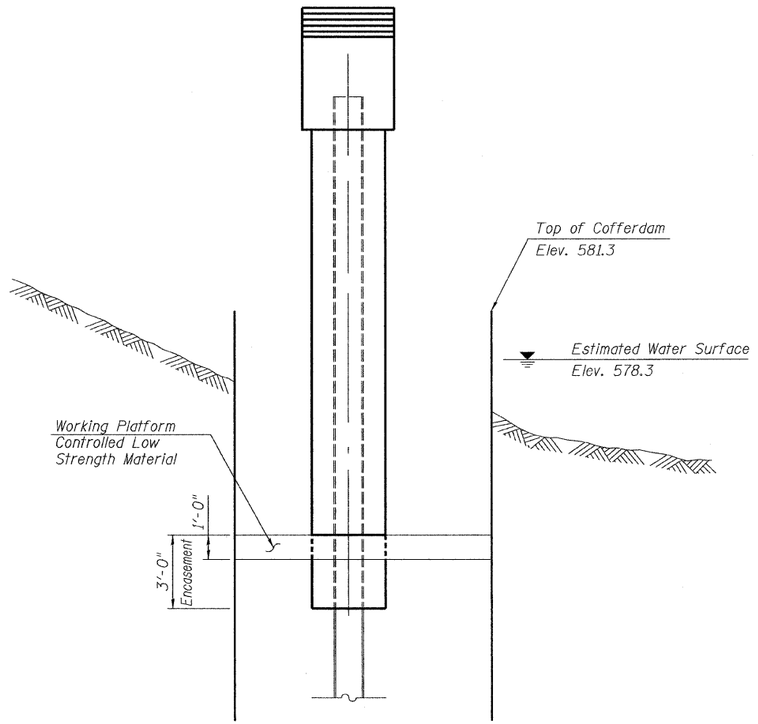
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	59
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

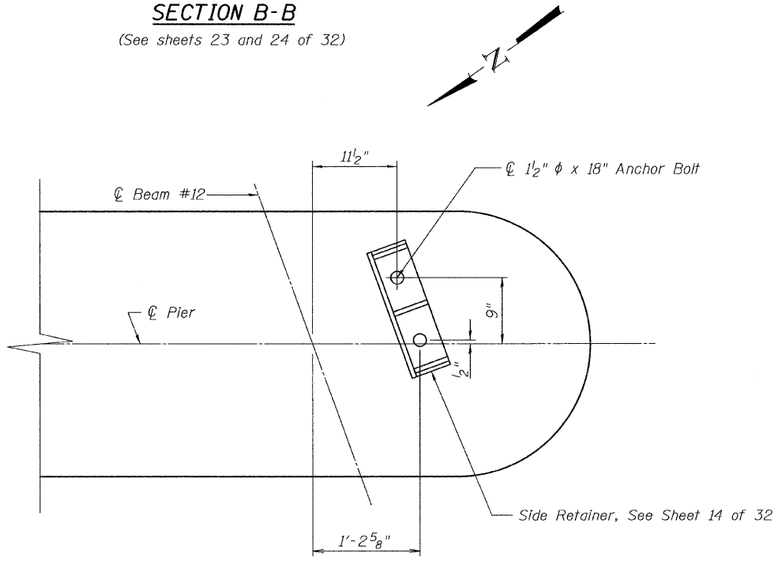
SHEET NO. 25
32 SHEETS

Contract # 60B98



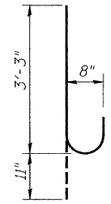
SECTION B-B

(See sheets 23 and 24 of 32)

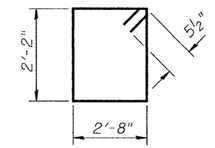


ANCHOR BOLT LAYOUT

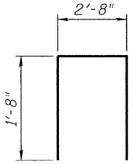
Beam 1 similar



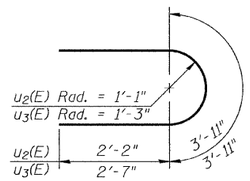
BAR $v_5(E)$



BAR $s_5(E)$



BAR $u_4(E)$



BARS $u_2(E)$ & $u_3(E)$

BILL OF MATERIAL PIER #1

Bar	No.	Size	Length	Shape
$h_1(E)$	108	#5	42'-5"	——
$p_3(E)$	20	#7	43'-1"	——
$p_4(E)$	3	#7	42'-10"	——
$s_5(E)$	110	#5	10'-7"	□
$u_2(E)$	54	#5	7'-9"	⊃
$u_3(E)$	6	#6	9'-1"	⊃
$u_4(E)$	44	#4	6'-0"	⊓
$v_4(E)$	172	#5	27'-9"	——
$v_5(E)$	66	#8	4'-2"	⊃
Cofferdam (Pier 1)		Each		1
Cofferdam Excavation		Cu. Yd.		267
Concrete Structures		Cu. Yd.		233.2
Reinforcement Bars, Epoxy Coated		Pound		14,430
Furnishing-Steel Piles, HP 14x89		Foot		1728
Driving Piles		Foot		1728
Test Pile, HP 14x89		Each		1
Piles Shoes		Each		19
Concrete Encasement		Cu. Yd.		10.6
Controlled Low Strength Material		Cu. Yd.		32.1

BILL OF MATERIAL PIER #2

Bar	No.	Size	Length	Shape
$h_1(E)$	108	#5	42'-5"	——
$p_3(E)$	20	#7	43'-1"	——
$p_4(E)$	3	#7	42'-10"	——
$s_5(E)$	110	#5	10'-7"	□
$u_2(E)$	54	#5	7'-9"	⊃
$u_3(E)$	6	#6	9'-1"	⊃
$u_4(E)$	44	#4	6'-0"	⊓
$v_4(E)$	172	#5	27'-9"	——
$v_5(E)$	66	#8	4'-2"	⊃
Cofferdam (Pier 2)		Each		1
Cofferdam Excavation		Cu. Yd.		177
Concrete Structures		Cu. Yd.		234.4
Reinforcement Bars, Epoxy Coated		Pound		14,430
Furnishing-Steel Piles, HP 14x89		Foot		1728
Driving Piles		Foot		1728
Test Pile, HP 14x89		Each		1
Piles Shoes		Each		19
Concrete Encasement		Cu. Yd.		10.6
Controlled Low Strength Material		Cu. Yd.		33.6

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

PC-1

11-1-06

PIER DETAILS & BAR LISTS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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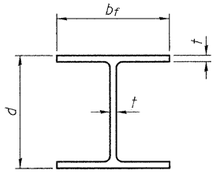
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	60
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

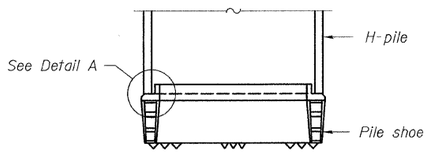
SHEET NO. 26
32 SHEETS

Contract # 60B98

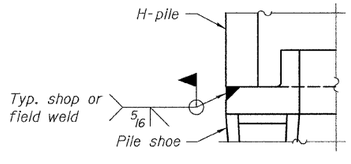


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

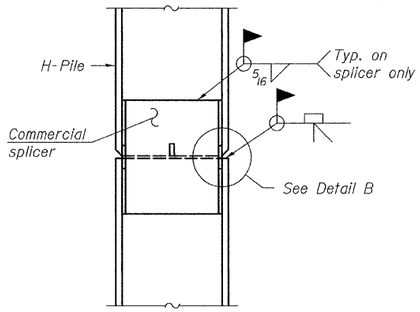


ELEVATION

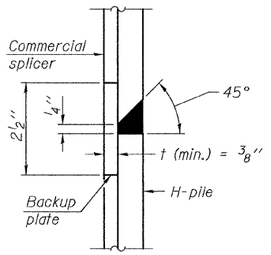


DETAIL A

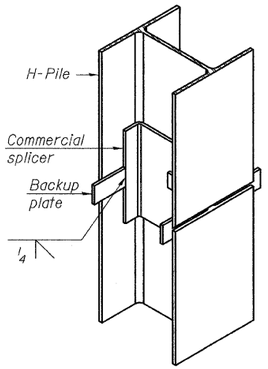
H-PILE SHOE ATTACHMENT



ELEVATION

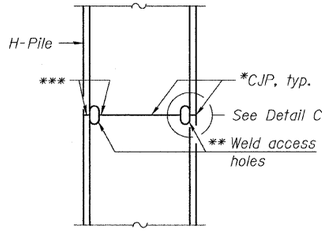


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



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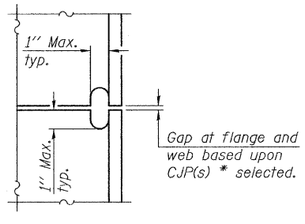
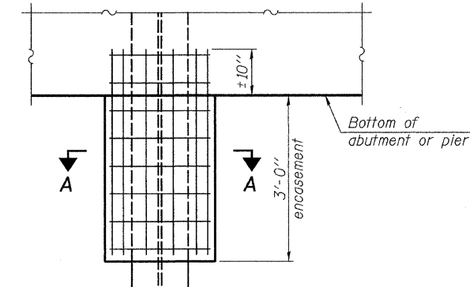


DETAIL C

COMPLETE PENETRATION WELD SPLICE



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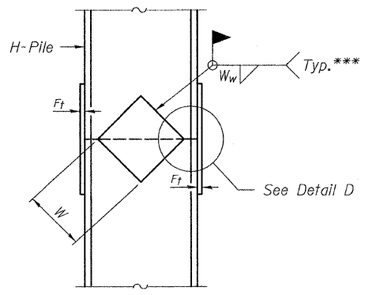
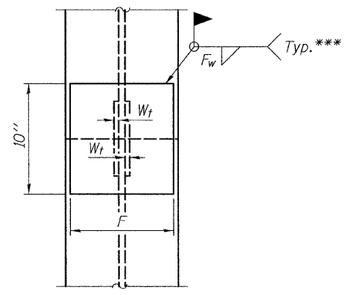
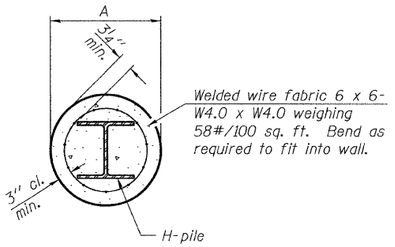


ELEVATION



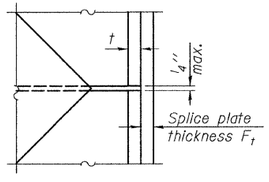
END VIEW



Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

PILE ENCASEMENT



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wf	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

*** Interrupt welds 1/4" from end of each pile.

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

F-HP 11-1-06

H-PILES (F-HP)

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

w:\emerson street\structural dwg's\26-h-piles (f-hp).dgn
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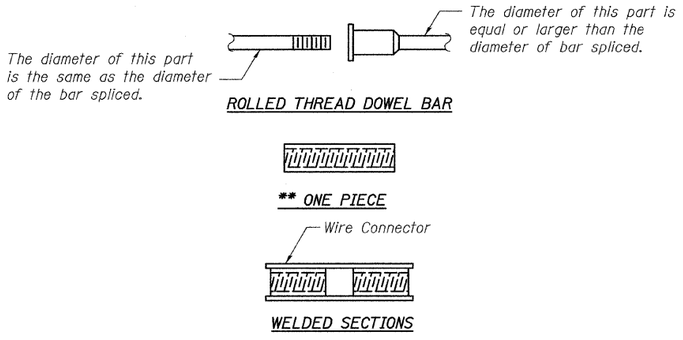
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	61
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

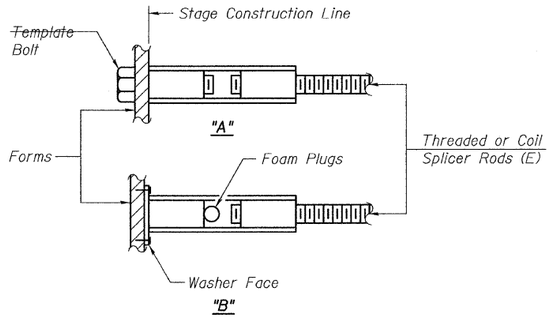
SHEET NO. 27
32 SHEETS

Contract # 60B98



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

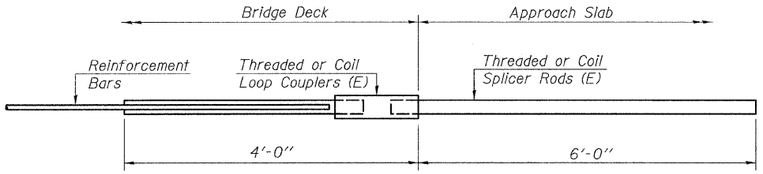
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times fy \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

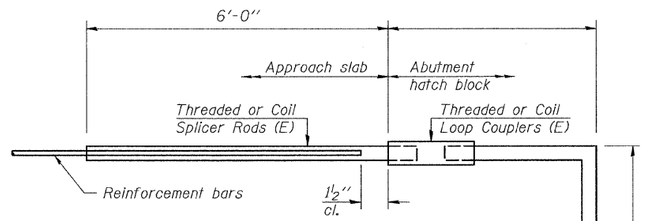
BAR SPLICER ASSEMBLIES

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



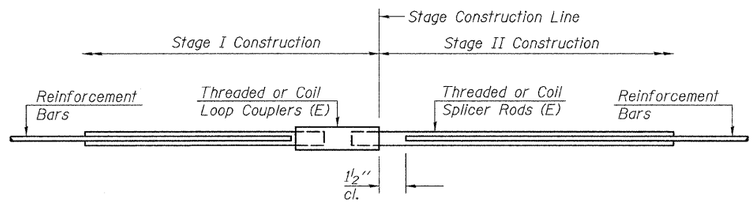
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 162



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

Bollinger, Lach & Associates, Inc.

BSD-1 11-1-06

BAR SPLICER ASSEMBLY DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	62
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 28
32 SHEETS

Contract # 60B98

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Arbor Ct., Suite 204
Naperville, Illinois 60565
(630) 355-2688

SOIL BORING LOG

PAGE 1 of 3
DATE June 25-26, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-1
Station: 101+39
Offset: 22.0' Left
Ground Surface Elev. 601.5

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
600.0 5.0" ASPHALT, 13.0" CONCRETE			
599.0 CLAYEY TOPSOIL-black	3		107
	5		
	5	3.2B	19
598.0 CLAY-brown & gray-very stiff (A-6)			
	4		
	5		
-5	6	2.0P	21
CLAY-brown & gray- stiff to very stiff (A-6) Wet			
	4		96
	5		
	5	3.1B	27
	5		91
	6		
-10	6	3.1B	29
	3		97
	4		
588.5	4	1.8B	28
	3		101
Torvane @ -15.0' Shear Strength=430psf	3		
-15	3	0.4B	22
CLAY-gray- very soft to soft (A-6) Wet			
	0		93
Torvane @ -17.5' Shear Strength=512psf	0		
	0	0.4B	27
	0		94
Torvane @ -20.0' Shear Strength=328psf	0		
-20	0	0.2B	28

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray- very soft to soft (A-6) Wet	0		
Torvane @ -22.5' Shear Strength=225psf	0		
	0	<0.25P	26
	0		
Torvane @ -25.0' Shear Strength=287psf	0		
-25	0	<0.25P	26
576.0			
	4		97
Torvane @ -27.5' Shear Strength=512psf	4		
	4	0.25B	23
CLAY-gray- soft to medium stiff (A-6)			
	0		
Torvane @ -30.0' Shear Strength=410psf	0		
-30	0	0.25P	24
	1		96
Torvane @ -35.0' Shear Strength=737psf	2		
-35	2	0.4B	24
	1		104
Torvane @ -40.0' Shear Strength=1024psf	2		
-40	3	0.6B	19

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Arbor Ct., Suite 204
Naperville, Illinois 60565
(630) 355-2688

SOIL BORING LOG

PAGE 2 of 3
DATE June 25-26, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-1
Station: 101+39
Offset: 22.0' Left
Ground Surface Elev. 601.5

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray- soft to medium stiff (A-6)			
	3		111
Torvane @ -45.0' Shear Strength=778psf	3		
-45	5	0.5B	19
	4		106
Torvane @ -50.0' Shear Strength=901psf	4		
-50	4	0.6B	21
549.5			
CLAY-gray-stiff (A-6)			
	4		109
Torvane @ -55.0' Shear Strength=1372psf	5		
-55	10	1.1B	20
	4		105
Torvane @ -60.0' Shear Strength=1475psf	5		
-60	7	1.25B	22

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-stiff (A-6)			
	5		
	6		
-65	8	1.25P	16
	6		114
	9		
-70	14	1.4B	15
	6		115
	6		
-75	8	1.2B	16
524.5			
CLAY-gray-medium stiff (A-6)			
	5		
	5		
-80	5	0.25P	15

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Arbor Ct., Suite 204
Naperville, Illinois 60565
(630) 355-2688

SOIL BORING LOG

PAGE 3 of 3
DATE June 25-26, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-1
Station: 101+39
Offset: 22.0' Left
Ground Surface Elev. 601.5

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
CLAY-gray-medium stiff (A-6)			
519.5			
	26		
	24		
SANDY CLAY to SANDY CLAY LOAM- gray-dense to very dense (A-4)			
-85	23	1.5P	13
	50/5"		
-90		3.5P	11
510.5			
Drillers Observation: Cobbles from -91.0' to -92.0'. 509.5			
	22		113
CLAY-gray-hard (A-6)	34		
-95	41	5.7B	15
503.0			
Drillers Observation: Fractured rock from -98.5' to -99.5'. 502.0			
Drillers Observation: App. Bedrock. 501.5	-100		

RUN 1 (-100.0' to -110.0')
Silurian System, Niagaran Series Dolomite
Light gray mottled gray with horizontal to wavy bedding. Slightly porous with some small vugs. Horizontal fractures @ -100.5' & -101.1'. Highly fractured from -101.1' to -101.6'. Horizontal fractures @ -102.0', -102.4', -102.7', -102.8', -103.1', -103.7', -104.6', -105.2', -105.7', -105.8', -106.0', -106.3', -107.0', -107.7' & -107.8'. Highly fractured from -108.3' to -108.8', and from -109.2' to -109.7'.

Recovery=100.0%
R.Q.D.=69.0%

491.5 -110

End of Boring @ -110.0'
Hollow Stem Augers to -10.0'
Rotary Drilling to Completion'
CME Automatic Hammer

-105 RUN 1
-115
-120

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

SOIL BORING LOG BR-1

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	63
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 29
32 SHEETS

Contract # 60B98

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Arbor Court, Suite 204
Naperville, Illinois 60565
(630) 355-2638

SOIL BORING LOG

PAGE 1 of 3
DATE June 11, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-2
Station: 104+49
Offset: 19' Right
Ground Surface Elev. 601.3

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				4.0" ASPHALT, 12.0" CONCRETE
600.0				
	3		124	CLAY–gray–very soft to soft (A–6) Wet
	13			Torvane @ –22.5'
	17	NP	6	Shear Strength=287psf
598.3				
	2			Silt Seams from –3.5' to –5.0'.
	4			Torvane @ –25.0'
–5	5	1.5P	24	Shear Strength=184psf
				CLAY–brown & gray–
				stiff to very stiff (A–6)
	3		100	
	5			Torvane @ –27.5'
	5	2.1B	23	Shear Strength=307psf
				573.3
	4		102	
	5			Torvane @ –30.0'
–10	7	2.0B	22	Shear Strength=563psf
	3		96	
	3			CLAY–gray–medium stiff to stiff (A–6)
	5	1.0B	28	
588.3				
	3		97	CLAY–gray–medium stiff (A–6) Wet
	3			Torvane @ –15.0'
–15	3	.25B	27	Shear Strength=553psf
	2			
	2			Torvane @ –17.5'
	2	0.25P	27	Shear Strength=553psf
582.3				
	0		87	CLAY–gray–very soft to soft (A–6) Wet
	0			Torvane @ –20.0'
–20	0	0.2B	29	Shear Strength=389psf

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
	0			
	0			
	0	<0.25P	28	Torvane @ –22.5' Shear Strength=287psf
	1		100	
	1			Torvane @ –25.0'
–25	3	<0.25P	27	Shear Strength=184psf
	0			
	0			Torvane @ –27.5'
	0	<0.25P	26	Shear Strength=307psf
	0			
	0			
	0			Torvane @ –30.0'
–30	0	0.25P	23	Shear Strength=563psf
				CLAY–gray–medium stiff to stiff (A–6)
	0		101	
	0			Torvane @ –35.0'
–35	0	0.2B	24	Shear Strength=533psf
	0		99	
	0			Torvane @ –40.0'
–40	0	0.7B	24	Shear Strength=1229psf

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

Geo Services Inc.
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805 Arbor Court, Suite 204
Naperville, Illinois 60565
(630) 355-2638

SOIL BORING LOG

PAGE 2 of 3
DATE June 11, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-2
Station: 104+49
Offset: 19' Right
Ground Surface Elev. 601.3

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				CLAY–gray–medium stiff to stiff (A–6)
559.3				
				CLAY–gray–soft (A–6) Wet
	1		100	
	1			Torvane @ –45.0'
–45	2	0.3B	25	Shear Strength=471psf
554.3				
	1		107	
	3			Torvane @ –50.0'
–50	4	1.25B	19	Shear Strength=1557psf
				CLAY–gray–medium stiff to stiff (A–6)
	4		110	
	5			Torvane @ –55.0'
–55	7	1.7B	16	Shear Strength=1679psf
	3		105	
	4			Torvane @ –60.0'
–60	7	1.4B	20	Shear Strength=1475psf

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				CLAY–gray–medium stiff to stiff (A–6)
	1			
	2			Torvane @ –65.0'
–65	2	0.5P	16	Shear Strength=840psf
	6		107	
	9			Torvane @ –70.0'
–70	13	1.75B	19	Shear Strength=1720psf
	5		115	
	7			Torvane @ –75.0'
–75	12	2.0B	16	Shear Strength=1761psf
	5			
	7			Torvane @ –80.0'
–80	8	1.75P	22	Shear Strength=1372psf

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Arbor Court, Suite 204
Naperville, Illinois 60565
(630) 355-2638

SOIL BORING LOG

PAGE 3 of 3
DATE June 11, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
SECTION 0707-B
COUNTY Cook
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. XX
Station 100+31.5 to 105+70
BORING NO. BR-2
Station: 104+49
Offset: 19' Right
Ground Surface Elev. 601.3

Surface Water Elev. 587.5
Stream Bed Elev. n/a
Groundwater Elevation:
First Encounter n/a
Upon Completion n/a
After ____ Hrs. ____

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	
				CLAY–gray–medium stiff to stiff (A–6)
519.3				
				CLAY–gray–very stiff to hard (A–6)
	18			
	20			
–85	25	3.0P	10	
	25		117	
	34	9.9S@		
–90	43	12.7%	11	
	18		107	
	27	3.2S@		
–95	29	11.3%	20	
502.3	50/1"			
501.3	–100		NR	

RUN 1 (–100.0' to –108.5')
Silurian System, Niagaran Series Dolomite
Light gray & fine grained with horizontal to wavy bedding becoming weathered & porous with gray mottling and wavy bedding @ –106.2'. Horizontal fractures throughout.
Recovery=98.2%
R.Q.D.=67.6%
–105 RUN 1
492.8
End of Boring @ –108.5'
Hollow Stem Augers to –10.0'
Rotary Drilling to Completion'
CME Automatic Hammer
–110
–115
–120

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B–Bulge, S–Shear, P–Penetrometer) ST–Shelby Tube Sample VS=Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR–No Recovery

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

SOIL BORING LOG BR-2

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	64
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 30
32 SHEETS

Contract # 60B98

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Aruelian Court, Suite 204
Naperville, Illinois 60565
(630) 355-2658

ROCK CORE LOG

PAGE 1 of 1
DATE June 25-26, 2007
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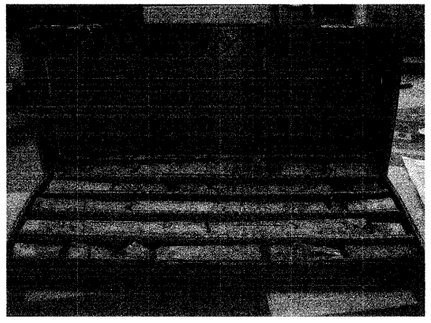
GSI JOB No. 07005

ROUTE FAU 1312
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
SECTION 0707-B
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
COUNTY Cook
CORING METHOD Rotary Wash
STRUCT. NO. XX
Station 100+31.5 to 105+70
CORING BARREL TYPE & SIZE NX Double Swivel-10 ft
Core Diameter 2.0 in
Top of Rock Elev. 502.0
Begin Core Elev. 501.5
BORING NO. BR-1
Station: 101+39
Offset: 22.0' Left
Ground Surface Elev. 601.5

DEPTH (ft)	RUN (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
	1	100.0	69.0	n/a	560

SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE
RUN 1 (-100.0' to -110.0')
Silurian System, Niagaran Series Dolomite
Light gray mottled gray with horizontal to wavy bedding. Slightly porous with some small vugs. Horizontal fractures @ -100.5' & -101.1'. Highly fractured from -101.1' to -101.6' Horizontal fractures @ -102.0', -102.4', -102.7', -102.8', -103.1', -103.7', -104.6', -105.2', -105.7', -105.8', -106.0', -106.3', -107.0', -107.7' & -107.8'. Highly fractured from -108.3' to -108.8', and from -109.2' to -109.7'.

Recovery=100.0%
R.Q.D.=69.0%



Color pictures of the cores XX Cores will be stored for examination for XX
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

Geo Services Inc.
Geotechnical, Environmental & Civil Engineering
805 Aruelian Court, Suite 204
Naperville, Illinois 60565
(630) 355-2658

ROCK CORE LOG

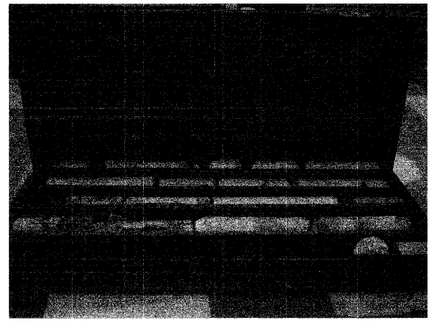
PAGE 1 of 1
DATE June 12, 2007
LOGGED BY RH
GSI JOB No. 07005

ROUTE FAU 1312
DESCRIPTION IDOT Project No. D-91-065-07, Contract No. 60B98
SECTION 0707-B
LOCATION Evanston Street Bridge over North Shore Channel, Cook County, Illinois
COUNTY Cook
CORING METHOD Rotary Wash
STRUCT. NO. XX
Station 100+31.5 to 105+70
CORING BARREL TYPE & SIZE NX Double Swivel-10 ft
Core Diameter 2.0 in
Top of Rock Elev. 502.3
Begin Core Elev. 501.3
BORING NO. BR-2
Station: 104+49
Offset: 19' Right
Ground Surface Elev. 601.3

DEPTH (ft)	RUN (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
	1	98.2	67.6	n/a	601

RUN 1 (-100.0' to -108.5')

Silurian System, Niagara Series Dolomite
Light gray & fine grained with horizontal to wavy bedding becoming weathered & porous with gray mottling and wavy bedding @ -106.2'. Horizontal fractures throughout.



Color pictures of the cores XX Cores will be stored for examination for XX
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

ROCK CORE LOGS BR-1 & BR-2

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	65
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	

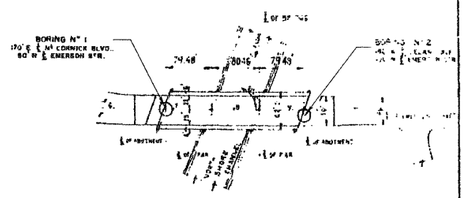
SHEET NO. 31
32 SHEETS

Contract # 60B98

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

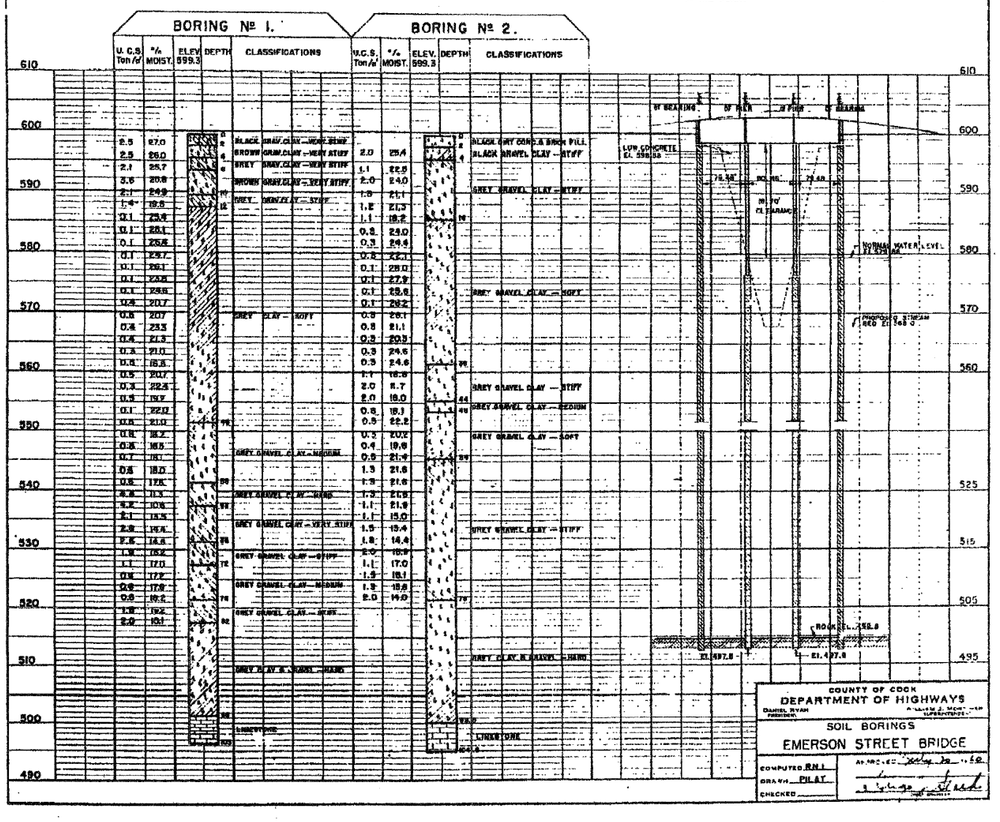
County Highway	Fiscal Year	Sheet No	Total Sheets
303	1960	31	31

Section 303-0708 MFT



PLAN OF PROPOSED IMPROVEMENT.
SCALE 1" = 10'

NOTE.
BORING DATA ARE SHOWN ON THE PLANS ONLY AS A GUIDE TO BIDDERS TO SHOW SOIL CONDITIONS WHICH MAY BE ENCOUNTERED IN THE WORK.



COUNTY OF COOK
DEPARTMENT OF HIGHWAYS
DANIEL RYAN, PRESIDENT
A. ALAN J. MOK, SUPERINTENDENT

SOIL BORINGS
EMERSON STREET BRIDGE

COMPUTED RNL
DRAWN PILAT
CHECKED

APPROVED July 30, 1960
Superintendent of Highways

DESIGNED	SRT
CHECKED	JJI
DRAWN	JSS
CHECKED	JJI

Bollinger, Lach & Associates, Inc.

BORING LOGS (1960)

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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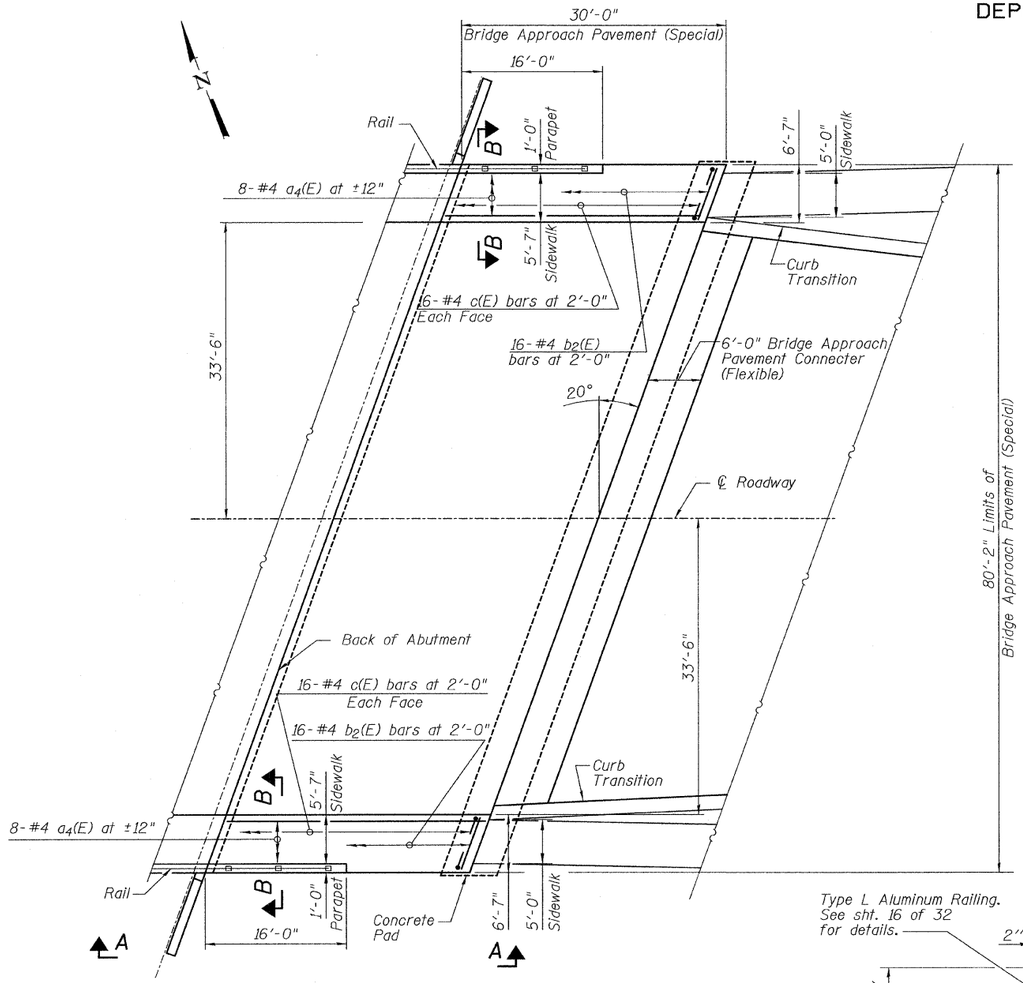
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1312	0707-B	Cook	80	66
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

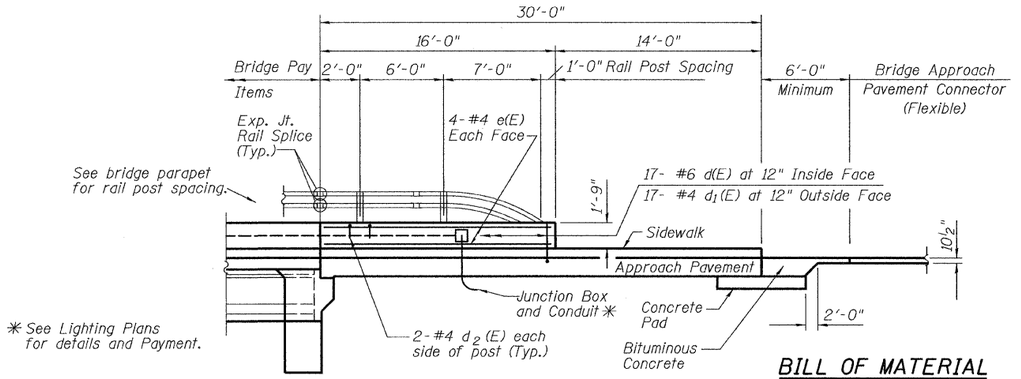
SHEET NO. 32
32 SHEETS

Contract # 60B98

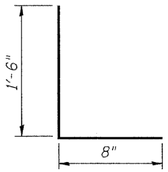


BRIDGE APPROACH PAVEMENT PLAN

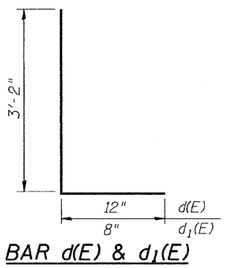
(East Approach Shown, West Similar by 180° Rotation)



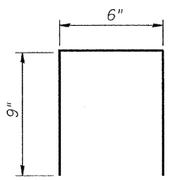
SECTION A-A



BAR c(E)



BAR d(E) & d1(E)



BAR d2(E)

BILL OF MATERIAL

(Total for both approaches)

Bar	No.	Size	Length	Shape
$a_4(E)$	32	#4	29'-8"	——
$b_2(E)$	64	#4	6'-8"	——
c(E)	128	#4	2'-2"	⌐
d(E)	68	#6	4'-2"	⌐
$d_1(E)$	68	#4	3'-10"	⌐
$d_2(E)$	24	#4	2'-0"	⌐
e(E)	24	#4	15'-8"	——
Reinforcement Bars, Epoxy Coated			Lbs.	1990
Concrete Superstructure			Cu. Yd.	23.9
✳✳ Protective Coat			Sq. Yd.	564
Bridge Approach Pavement (Special)			Sq. Yd.	535
Bridge Approach Pavement Connecter (Flexible)			Sq. Yd.	87
Aluminum Railing, Type L			Foot	60

All Reinforcement bars shall be epoxy coated.

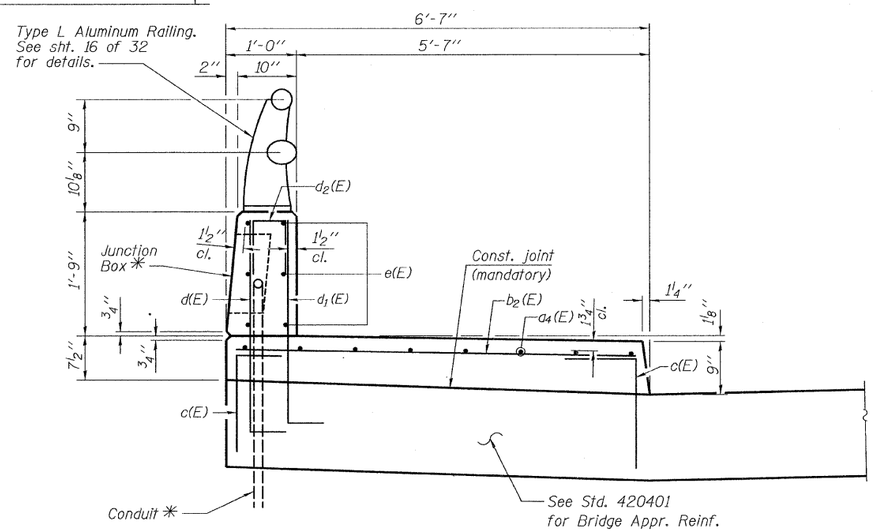
See Standard 420401 for additional Bridge Approach Pavement Reinforcement and details.

Quantity for Reinforcement Bars, Epoxy Coated and Concrete Superstructure are for Sidewalk and Parapet only.

For top of approach pavement elevations, see sheet 9 of 32.

✳✳ Approach pavement, sidewalk and parapet

Concrete for sidewalk & parapet is included in pay item "Concrete Superstructure". All items are included with roadway quantities.



SECTION B-B

DESIGNED	JJI
CHECKED	SRT
DRAWN	JSS
CHECKED	SRT

APPROACH PAVEMENT DETAILS

EMERSON STREET OVER
NORTH SHORE CHANNEL
(PUBLIC BODY OF WATER)
F.A.U. ROUTE 1312 SECTION 0707-B
COOK COUNTY STA. 102+84.62
STRUCTURE NUMBER 016-2858

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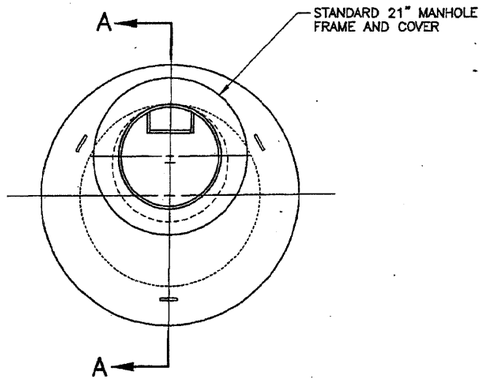
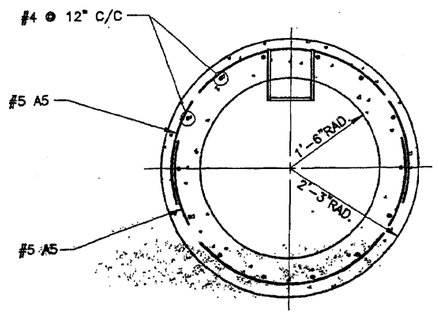
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	67

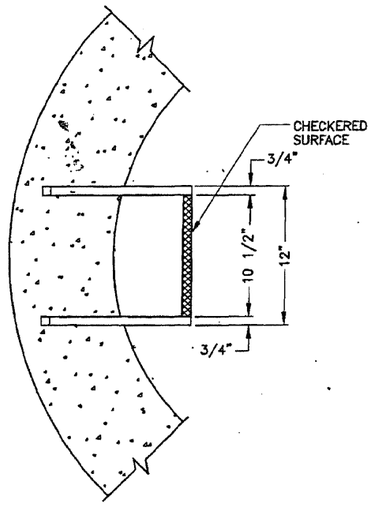
CONTRACT NO: 60B98



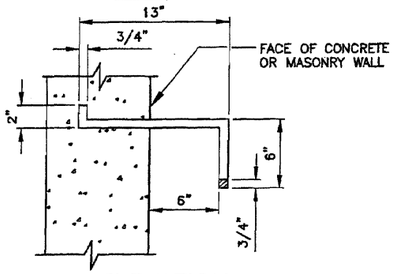
PLAN



SECTIONAL PLAN



PLAN



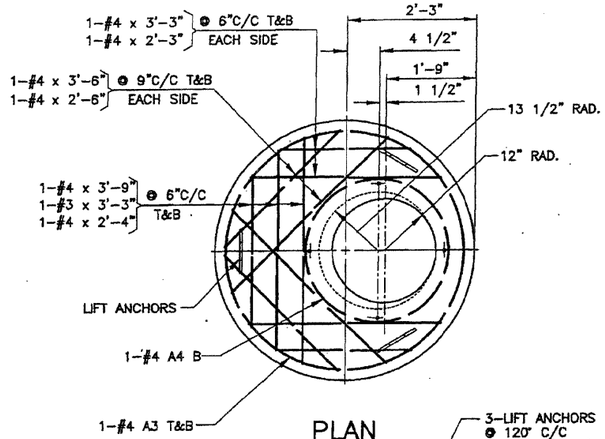
ELEVATION

MANHOLE STEPS

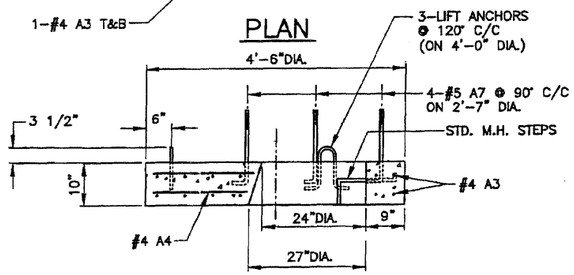
NOT TO SCALE

MATERIAL:

DUCTILE IRON GRADE 65-45-12
FULLY ANNEALED CONFORMING
TO ASTM SPECIFICATIONS



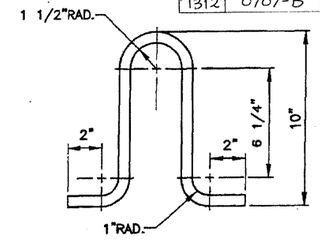
PLAN



SECTION

PRECAST TOP SLAB DETAIL

NOT TO SCALE

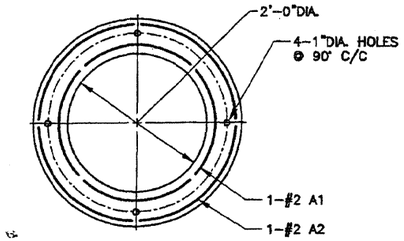


LIFT ANCHOR DETAIL

NOT TO SCALE

MATERIAL:

5/8" DIA. x 2'-3"A-36 STEEL
ROD GALVANIZED AFTER FABRICATION



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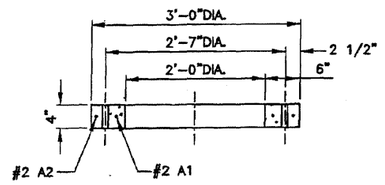
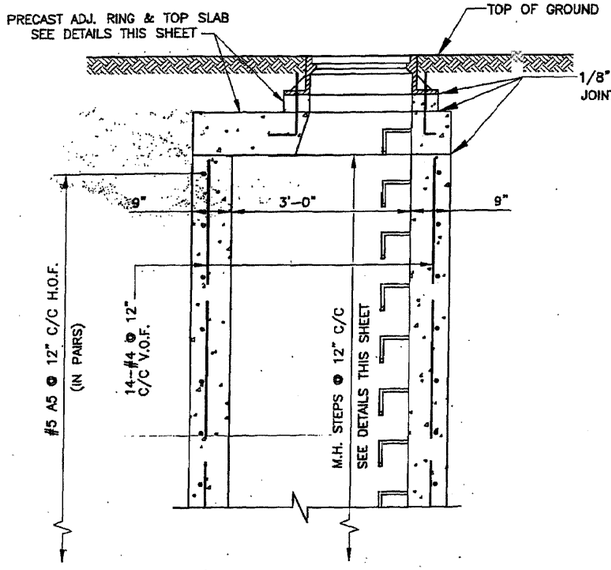


SECTION

PRECAST ADJUSTMENT RING DETAIL

NOT TO SCALE



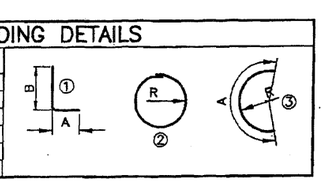
SECTION "A-A"

STANDARD MANHOLE BARREL

NOT TO SCALE

RE-BAR BENDING DETAILS

MARK	SIZE	LENGTH	TYPE	A	B	R
A1	#2	7'-6"	②	–	–	13 1/2"
A2	#2	9'-6"	②	–	–	17"
A3	#4	13'-6"	②	–	–	24"
A4	#4	9'-3"	②	–	–	16 1/2"
A5	#5	7'-10"	③	8'-9"	–	27 1/2"
A7	#5	2'-0"	①	6"	1'-6"	–



NOTE:

9" THICK PRECAST CONCRETE RINGS WITH CAST IN PLACE RUNGS MAY BE USED IN PLACE OF CAST IN PLACE CONCRETE WHEN EXTENDING THE HEIGHT OF THE MANHOLE BARREL. ALL EXTENSION SHALL BE IN ONE PIECE AND IN INCREMENTS OF 12".

ALL JOINTS SHALL BE CLEANED, SQUARED AND GROUTED IN A MANNER TO PRECLUDE POSSIBILITY OF LEAKS AT JOINT.

THE PRECAST TOP SLAB SHALL BE REMOVED AND REPLACED AS REQUIRED.

ALL ELEMENTS OF THE MANHOLE DISTURBED OR DAMAGED DURING ALTERATION SHALL BE CORRECTED OR REPLACED TO MEET THE STANDARD HEREIN SHOWN AND SPECIFIED.

ALL CONCRETE SHALL BE CLASS "R".

ALL GROUT SHALL BE 1 PART CEMENT TO 3 PARTS SAND WITH MINIMUM WATER TO ACHIEVE A STIFF PLASTIC CONSISTANCY WITH ZERO SLUMP.

ALL WORKMANSHIP AND MATERIALS NOT SPECIFIED SHALL BE AS PER STANDARD PREPRINTED MWRDGC SPECIFICATIONS TITLED:
GENERAL SPECIFICATIONS – CONSTRUCTION CONTRACTS
GENERAL SPECIFICATIONS – SEWERS
GENERAL SPECIFICATIONS – CONCRETE

PROCEDURE:

A) TO RAISE ELEVATION 0" TO 8" MAX., ADD 4" THICK ADJUSTMENT RINGS AS DETAILED. INCREMENTS OF LESS THAN 4" SHALL BE OBTAINED BY HAND PACKING A DRY CEMENT GROUT OVER 100% OF THE BEARING AREA.

B) TO RAISE ELEVATION OVER 8" AND LESS THAN 12", REMOVE THE 4" ADJUSTMENT RING AND EXTEND THE 9" THICK MANHOLE BARREL 12" WITH CAST IN PLACE CONCRETE REINFORCED AS DETAILED AND WITH LADDER RUNG AS DETAILED. TOP OF EXISTING CONCRETE TO BE CLEANED AND ROUGHENED AND NEW CONCRETE PLACED IN A MANNER TO INSURE BONDING AND NO LEAKAGE. FOR INCREMENTS BETWEEN 8" AND 12" PLACE GROUT FILLER AS IN (A) ABOVE.

C) TO RAISE ELEVATION 12" AND ABOVE, ADD TO 9" THICK MANHOLE BARREL ONLY IN INCREMENTS OF 12" WITH RUNGS AT 12" O.C. AS DESCRIBED IN (B). FOR INCREMENTS BETWEEN 12" ADD OR REMOVE 4" ADJUSTMENT RINGS AND GROUT FILLER AS DESCRIBED IN (A) AND (B).

REVISIONS		
NO	DATE	BY

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

PROCEDURE FOR ADJUSTING ELEVATION OF EXISTING 36" DIA. STANDARD MANHOLES

Correct
Engr. of Sewer Design

Approved
Assistant Chief Engineer

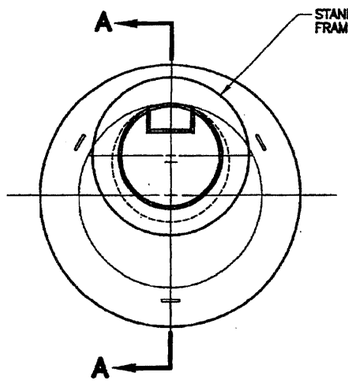
Approved
Chief Engineer

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE	SHEET NO.
XX	XX	XX	XX	X-X-X	XX

O:\Standards\new_dgn\S-122.dgn 04/17/09 10:10:11

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	68

CONTRACT NO. 60B98



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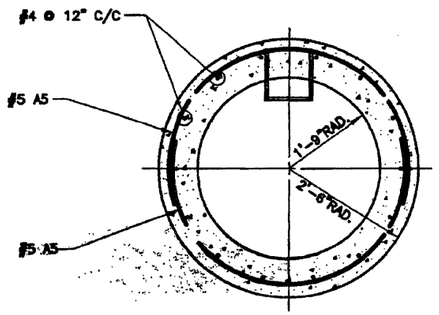
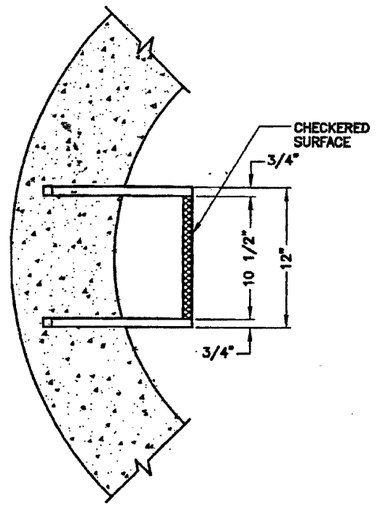


SECTIONAL PLAN



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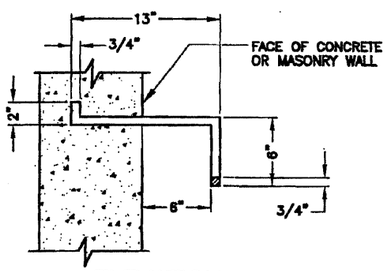
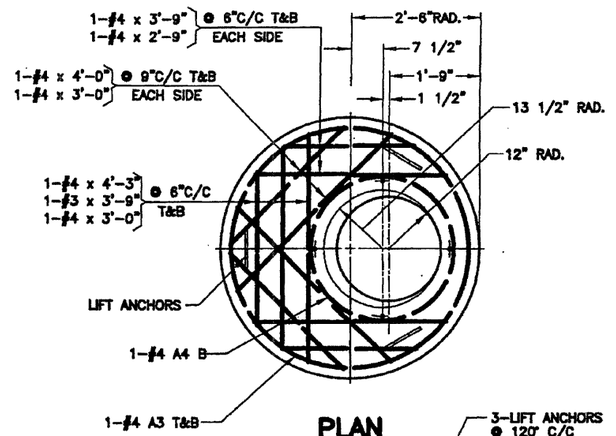


ELEVATION

MANHOLE STEPS

SCALE: 2"= 1'- 0"

MATERIAL:
DUCTILE IRON GRADE 65-45-12
FULLY ANNEALED CONFORMING
TO ASTM SPECIFICATIONS



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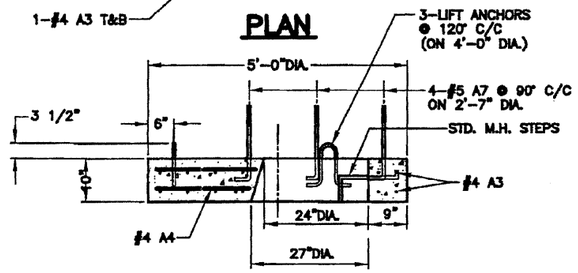
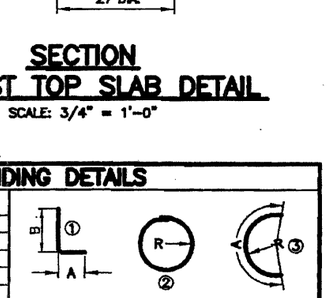


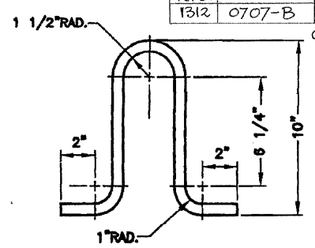
SECTION
PRECAST TOP SLAB DETAIL

SCALE: 3/4" = 1'-0"

RE-BAR BENDING DETAILS

MARK	SIZE	LENGTH	TYPE	A	B	R
A1	#2	7'-6"	②	-	-	13 1/2"
A2	#2	9'-6"	②	-	-	17"
A3	#4	15'-0"	②	-	-	27 1/2"
A4	#4	9'-3"	②	-	-	16 1/2"
A5	#5	8'-9"	③	8'-9"	-	27 1/2"
A7	#5	2'-0"	①	8"	1'-6"	-

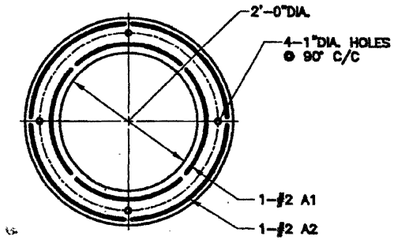




LIFT ANCHOR DETAIL

SCALE: 3" = 1'-0"

MATERIAL:
5/8" DIA. x 2'-3"A-36 STEEL
ROD GALVANIZED AFTER FABRICATION



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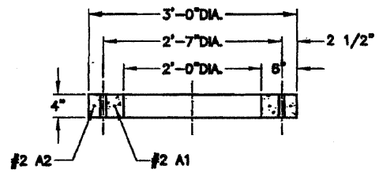
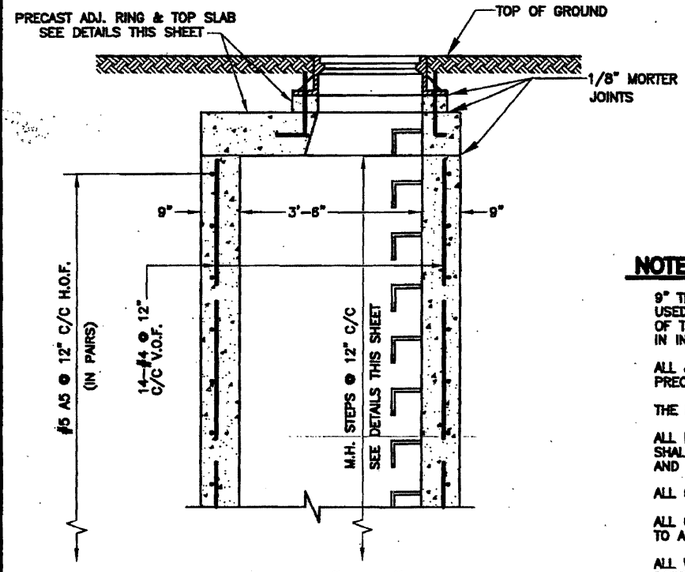


SECTION
PRECAST ADJUSTMENT RING DETAIL

SCALE: 1" = 1'-0"



SECTION "A-A"
STANDARD MANHOLE BARREL

SCALE: 3/4" = 1'-0"

NOTE:

9" THICK PRECAST CONCRETE RINGS WITH CAST IN PLACE RUNGS MAY BE USED IN PLACE OF CAST IN PLACE CONCRETE WHEN EXTENDING THE HEIGHT OF THE MANHOLE BARREL. ALL EXTENSION SHALL BE IN ONE PIECE AND IN INCREMENTS OF 12".

ALL JOINTS SHALL BE CLEANED, SQUARED AND GROUTED IN A MANNER TO PRECLUDE POSSIBILITY OF LEAKS AT JOINT.

THE PRECAST TOP SLAB SHALL BE REMOVED AND REPLACED AS REQUIRED.

ALL ELEMENTS OF THE MANHOLE DISTURBED OR DAMAGED DURING ALTERATION SHALL BE CORRECTED OR REPLACED TO MEET THE STANDARD HEREIN SHOWN AND SPECIFIED.

ALL CONCRETE SHALL BE CLASS "R".

ALL GROUT SHALL BE 1 PART CEMENT TO 3 PARTS SAND WITH MINIMUM WATER TO ACHIEVE A STIFF PLASTIC CONSISTANCY WITH ZERO SLUMP.

ALL WORKMANSHIP AND MATERIALS NOT SPECIFIED SHALL BE AS PER STANDARD PREPRINTED MWRDGC SPECIFICATIONS TITLED:
GENERAL SPECIFICATIONS - CONSTRUCTION CONTRACTS
GENERAL SPECIFICATIONS - SEWERS
GENERAL SPECIFICATIONS - CONCRETE

PROCEDURE:

A) TO RAISE ELEVATION 0" TO 8" MAX., ADD 4" THICK ADJUSTMENT RINGS AS DETAILED. INCREMENTS OF LESS THAN 4" SHALL BE OBTAINED BY HAND PACKING A DRY CEMENT GROUT OVER 100% OF THE BEARING AREA.

B) TO RAISE ELEVATION OVER 8" AND LESS THAN 12", REMOVE THE 4" ADJUSTMENT RING AND EXTEND THE 9" THICK MANHOLE BARREL 12" WITH CAST IN PLACE CONCRETE REINFORCED AS DETAILED AND WITH LADDER RUNG AS DETAILED. TOP OF EXISTING CONCRETE TO BE CLEANED AND ROUGHENED AND NEW CONCRETE PLACED IN A MANNER TO INSURE BONDING AND NO LEAKAGE. FOR INCREMENTS BETWEEN 8" AND 12" PLACE GROUT FILLER AS IN (A) ABOVE.

C) TO RAISE ELEVATION 12" AND ABOVE, ADD TO 9" THICK MANHOLE BARREL ONLY IN INCREMENTS OF 12" WITH RUNGS AT 12" O.C. AS DESCRIBED IN (B). FOR INCREMENTS BETWEEN 12" ADD OR REMOVE 4" ADJUSTMENT RINGS AND GROUT FILLER AS DESCRIBED IN (A) AND (B).

D) TO LOWER ELEVATION 0" TO 4", REMOVE 4" THICK ADJUSTMENT RING AND FILL INCREMENTS OF 0" TO 4" WITH GROUT AS DESCRIBED IN (A).

E) TO LOWER ELEVATION MORE THAN 4", REMOVE 9" THICK MANHOLE BARREL ONLY IN INCREMENTS OF 12" AND ADD OR REMOVE 4" THICK ADJUSTMENT RINGS AND GROUT AS REQUIRED AND AS DESCRIBED IN (A) AND (B).

REVISIONS		
NO	DATE	BY

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

PROCEDURE FOR ADJUSTING ELEVATION OF EXISTING 42" DIA. STANDARD MANHOLES

Correct
Engr. of Sewer Design

Approved
Assistant Chief Engineer

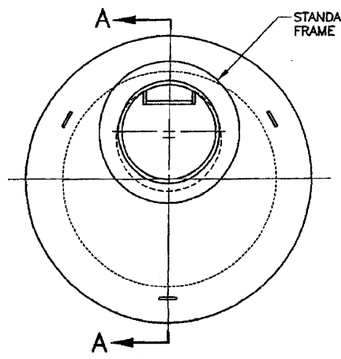
Approved
Chief Engineer

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE:	SHEET NO.
XX	XX	XX	XX	X-X-X	XX

O:\Standards\sew_dgn\B-120.dwg 04/17/02 at 12:09

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1312	0707-B	COOK	80	69

CONTRACT NO. 60B98



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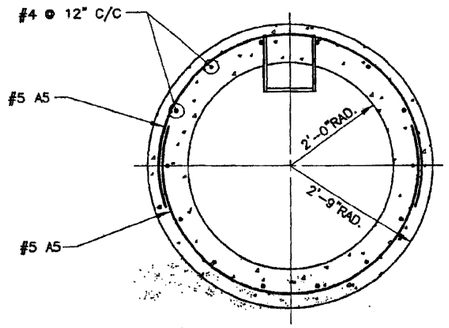
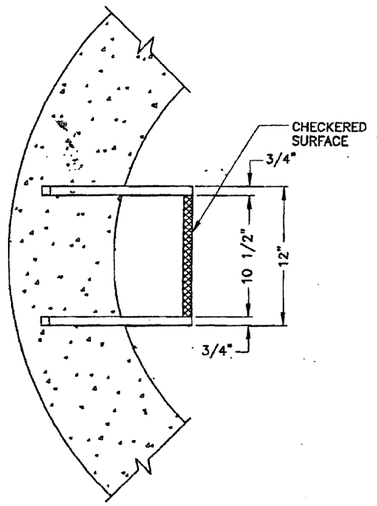


SECTIONAL PLAN



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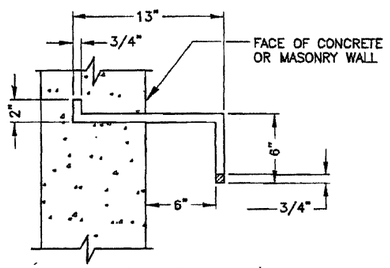


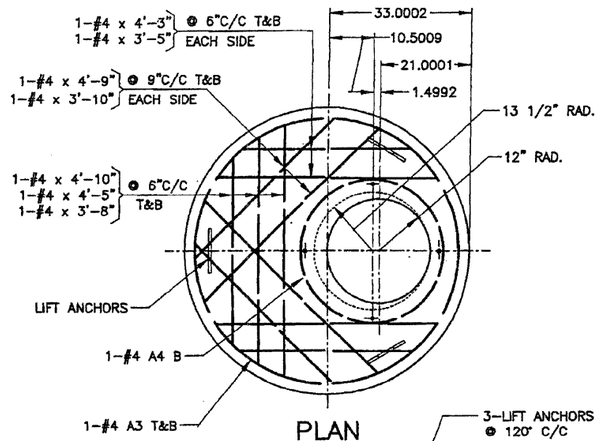
ELEVATION

MANHOLE STEPS

SCALE: 2"= 1'- 0"

MATERIAL:

DUCTILE IRON GRADE 65-45-12 FULLY ANNEALED CONFORMING TO ASTM SPECIFICATIONS



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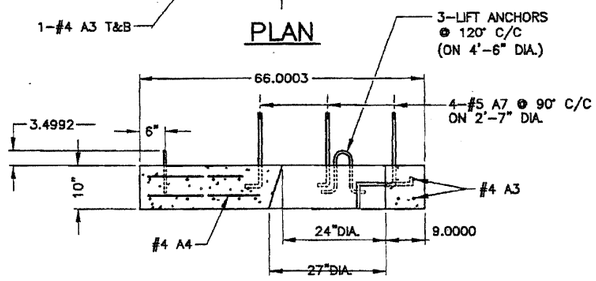
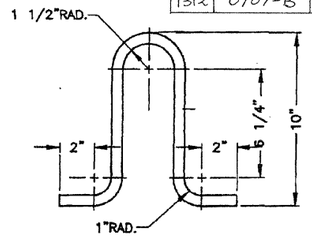


SECTION

PRECAST TOP SLAB DETAIL

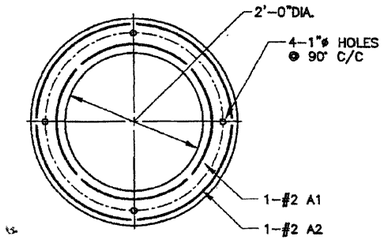
SCALE: 3/4" = 1'-0"



LIFT ANCHOR DETAIL

SCALE: 3" = 1'-0"

MATERIAL: 5/8" DIA. x 2'-3"A-36 STEEL ROD GALVANIZED AFTER FABRICATION



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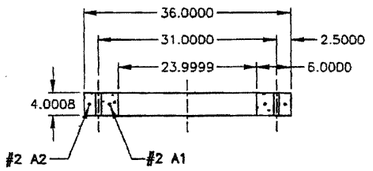
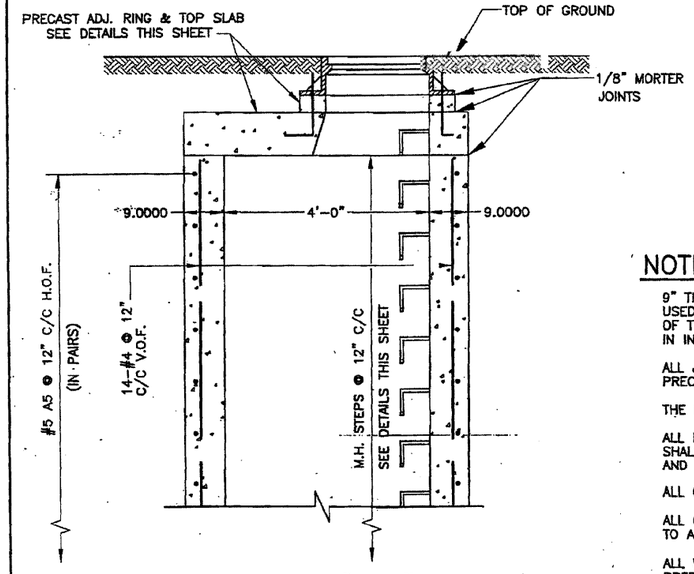


SECTION

PRECAST ADJUSTMENT RING DETAIL

SCALE: 1" = 1'-0"



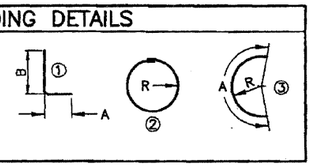
SECTION "A-A"

STANDARD MANHOLE BARREL

SCALE: 3/4" = 1'-0"

RE-BAR BENDING DETAILS

MARK	SIZE	LENGTH	TYPE	A	B	R
A1	#2	7'-6"	②	–	–	13 1/2"
A2	#2	9'-6"	②	–	–	17"
A3	#4	15'-0"	②	–	–	29 1/2"
A4	#4	9'-3"	②	–	–	16 1/2"
A5	#5	8'-9"	③	8'-9"	–	29 1/2"
A7	#5	2'-0"	①	6"	1'-6"	–



NOTE:

9" THICK PRECAST CONCRETE RINGS WITH CAST IN PLACE RUNGS MAY BE USED IN PLACE OF CAST IN PLACE CONCRETE WHEN EXTENDING THE HEIGHT OF THE MANHOLE BARREL. ALL EXTENSION SHALL BE IN ONE PIECE AND IN INCREMENTS OF 12".

ALL JOINTS SHALL BE CLEANED, SQUARED AND GROUTED IN A MANNER TO PRECLUDE POSSIBILITY OF LEAKS AT JOINT.

THE PRECAST TOP SLAB SHALL BE REMOVED AND REPLACED AS REQUIRED.

ALL ELEMENTS OF THE MANHOLE DISTURBED OR DAMAGED DURING ALTERATION SHALL BE CORRECTED OR REPLACED TO MEET THE STANDARD HEREIN SHOWN AND SPECIFIED.

ALL CONCRETE SHALL BE CLASS "R".

ALL GROUT SHALL BE 1 PART CEMENT TO 3 PARTS SAND WITH MINIMUM WATER TO ACHIEVE A STIFF PLASTIC CONSISTANCY WITH ZERO SLUMP.

ALL WORKMANSHIP AND MATERIALS NOT SPECIFIED SHALL BE AS PER STANDARD PREPRINTED MWRDGC SPECIFICATIONS TITLED:

GENERAL SPECIFICATIONS – CONSTRUCTION CONTRACTS
GENERAL SPECIFICATIONS – SEWERS
GENERAL SPECIFICATIONS – CONCRETE

PROCEDURE:

A) TO RAISE ELEVATION 0" TO 8" MAX., ADD 4" THICK ADJUSTMENT RINGS AS DETAILED. INCREMENTS OF LESS THAN 4" SHALL BE OBTAINED BY HAND PACKING A DRY CEMENT GROUT OVER 100% OF THE BEARING AREA.

B) TO RAISE ELEVATION OVER 8" AND LESS THAN 12", REMOVE THE 4" ADJUSTMENT RING AND EXTEND THE 9" THICK MANHOLE BARREL 12" WITH CAST IN PLACE CONCRETE REINFORCED AS DETAILED AND WITH LADDER RUNG AS DETAILED. TOP OF EXISTING CONCRETE TO BE CLEANED AND ROUGHENED AND NEW CONCRETE PLACED IN A MANNER TO INSURE BONDING AND NO LEAKAGE. FOR INCREMENTS BETWEEN 8" AND 12" PLACE GROUT FILLER AS IN (A) ABOVE.

C) TO RAISE ELEVATION 12" AND ABOVE, ADD TO 9" THICK MANHOLE BARREL ONLY IN INCREMENTS OF 12" WITH RUNGS AT 12" O.C. AS DESCRIBED IN (B). FOR INCREMENTS BETWEEN 12" ADD OR REMOVE 4" ADJUSTMENT RINGS AND GROUT FILLER AS DESCRIBED IN (A) AND (B).

D) TO LOWER ELEVATION 0" TO 4", REMOVE 4" THICK ADJUSTMENT RING AND FILL INCREMENTS OF 0" TO 4" WITH GROUT AS DESCRIBED IN (A).

E) TO LOWER ELEVATION MORE THAN 4", REMOVE 9" THICK MANHOLE BARREL ONLY IN INCREMENTS OF 12" AND ADD OR REMOVE 4" THICK ADJUSTMENT RINGS AND GROUT AS REQUIRED AND AS DESCRIBED IN (A) AND (B).

REVISIONS		
NO	DATE	BY

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

PROCEDURE FOR ADJUSTING ELEVATION OF EXISTING 48" DIA. STANDARD MANHOLES

Correct
Engr. of Sewer Design

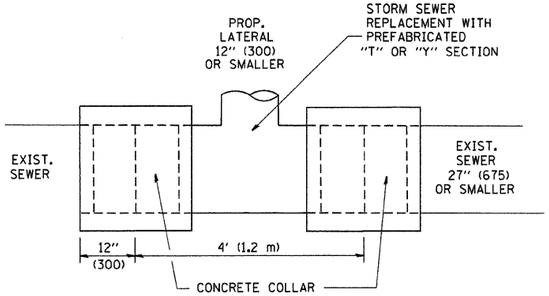
Approved
Assistant Chief Engineer

Approved
Chief Engineer

DESIGNED	XX	DRAWN	FM	CHECKED	XX	REVIEWED	XX	DATE:	4-7-98	SHEET NO.	XX

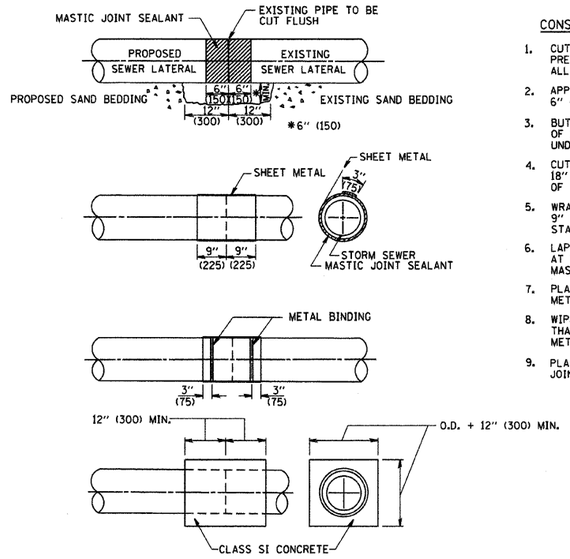
CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	70
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



DETAIL "A"

LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER

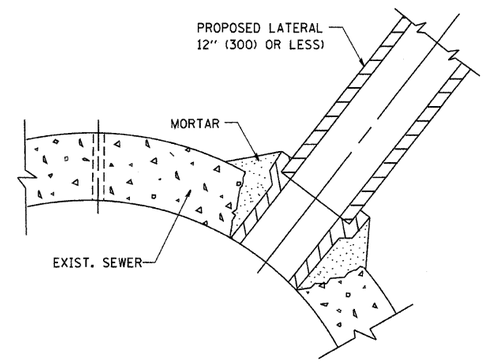


DETAIL "B"

CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12' x 6' (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERANCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"

PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.

II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:

A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".

B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".

IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

SCALE: VERT. NONE HORIZ.

DRAWN BY

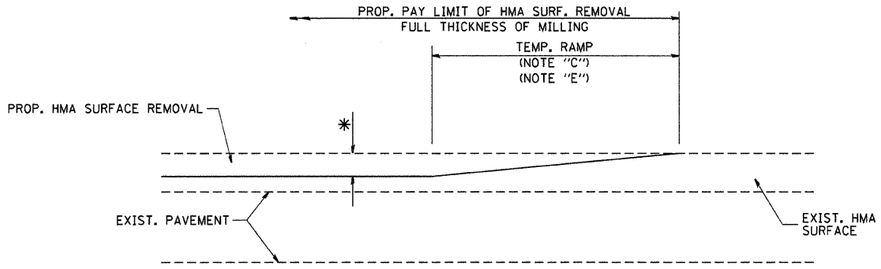
CHECKED BY

BD500-01 (BD-7)

PLOT DATE = 3/6/2007
FILE NAME = c:\projects\bd87.dgn
PLOT SCALE = 50.000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60B98

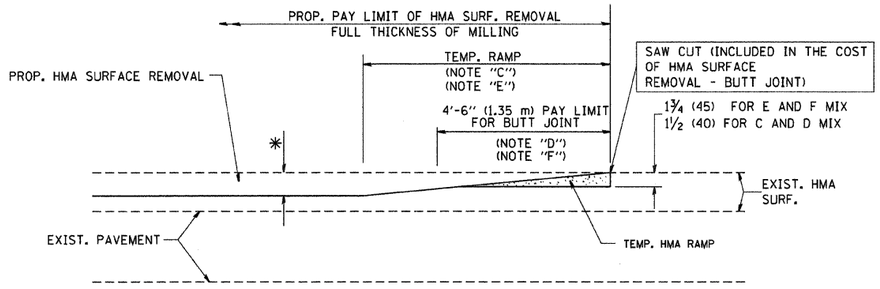
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	71
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

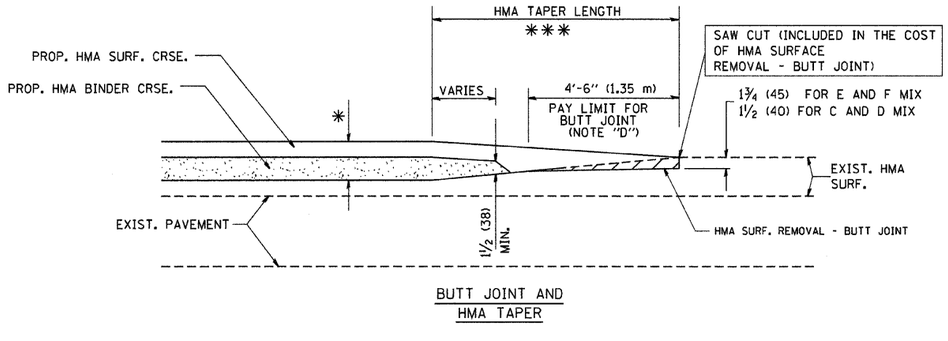


HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

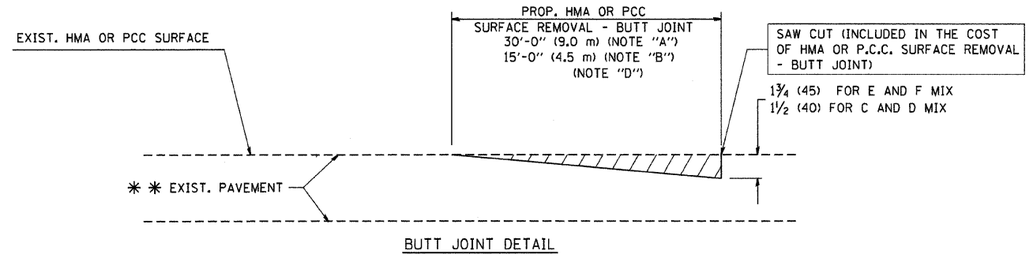
OPTION 2

TYPICAL TEMPORARY RAMP

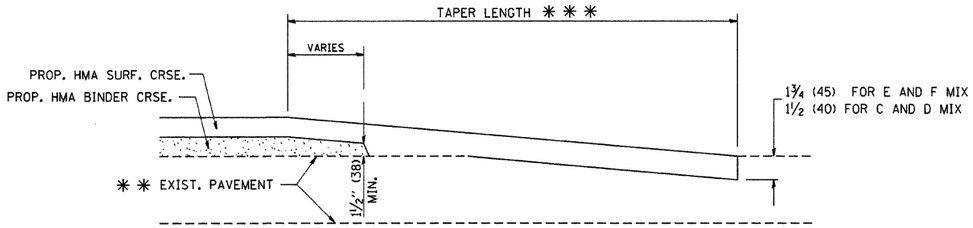


BUTT JOINT AND HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.

B: MINOR SIDE ROADS.

C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT

G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. NONE HORIZ.

DRAWN BY

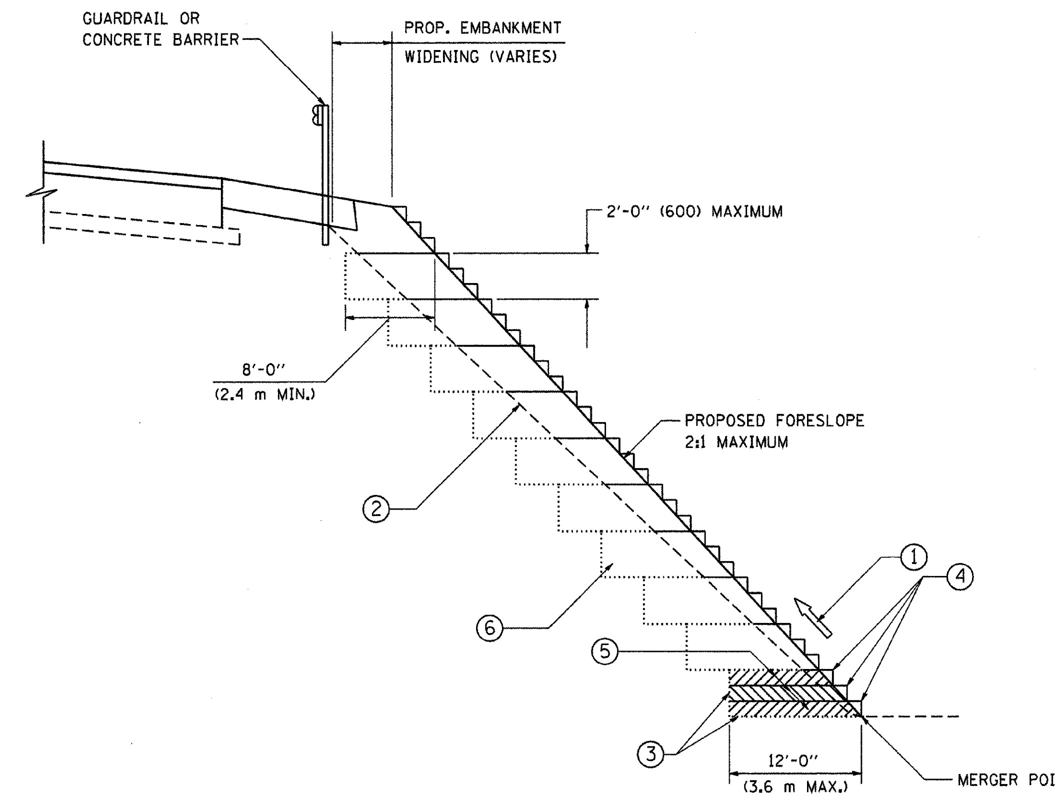
CHECKED BY

BD400-05 (VI=BD32)

PLOT DATE = 3/5/2007
FILE NAME = c:\projects\bd32.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bowerdl

CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	72
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
7. SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
	06/16/04

ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT
WIDENING

SCALE: VERT. HORIZ. NONE

DRAWN BY: CADD

CHECKED BY: S.E.B.

BD-51

PLOT DATE = 3/5/2007
FILE NAME = K:\diststd\bd51.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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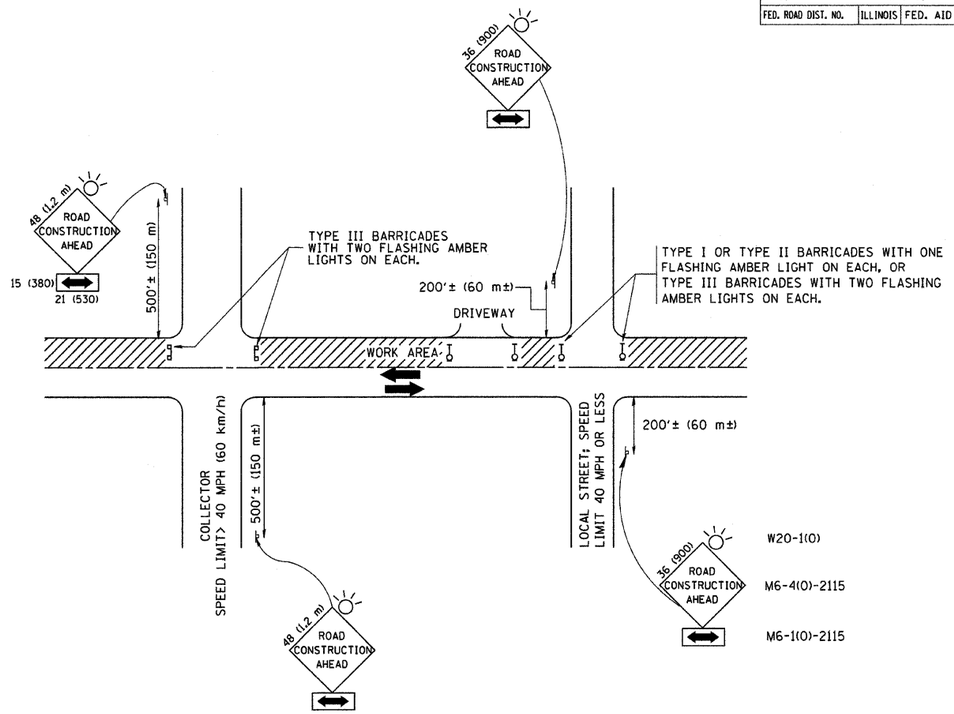
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE

DRAWN BY

CHECKED BY

TC-10

PLOT DATE = 3/6/2007
FILE NAME = c:\dgn\tc10.dgn
PLOT SCALE = 50.000 '/ IN.
USER NAME = bowerdl

CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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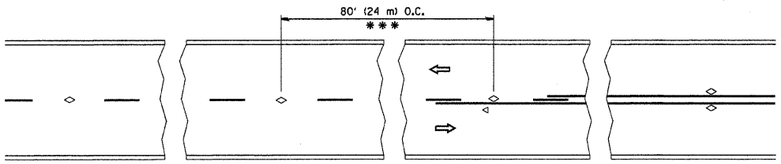
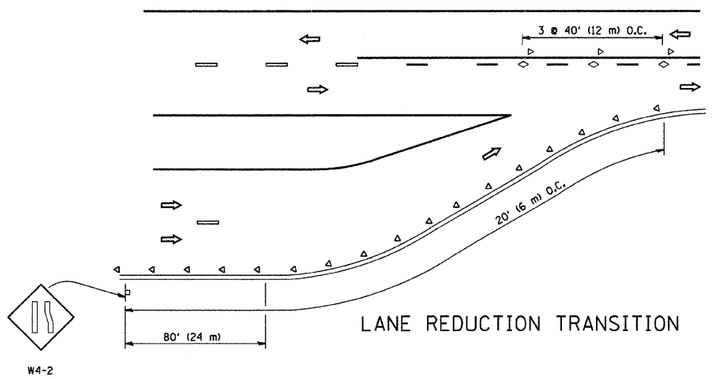
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

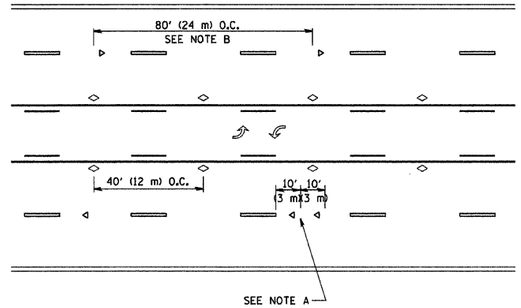


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

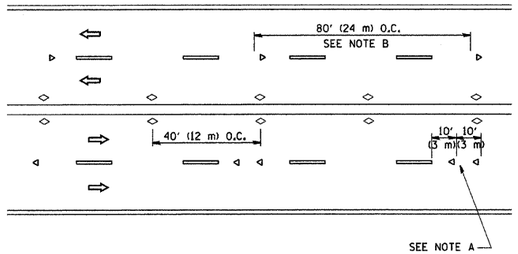
TWO-LANE/TWO-WAY



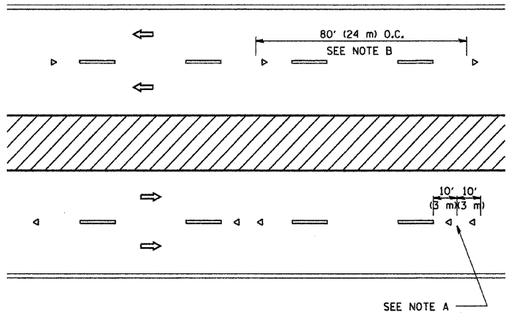
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

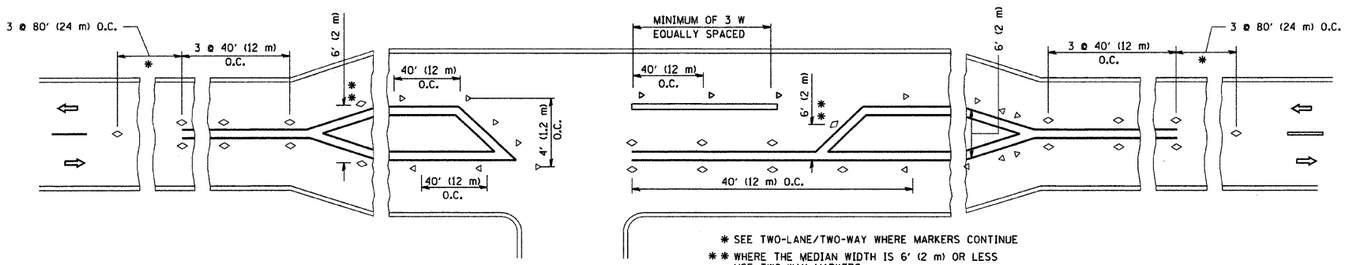
A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

LEFT TURN

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-11

PLOT DATE = 3/6/2007
FILE NAME = c:\dgn\tc11.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = boumrdl

CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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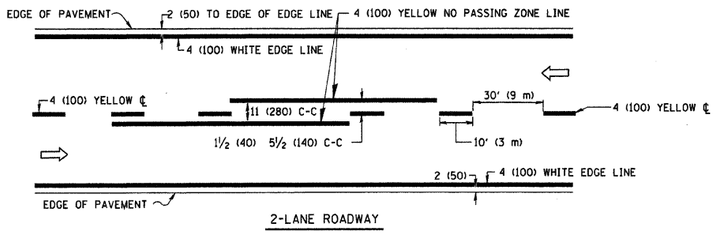
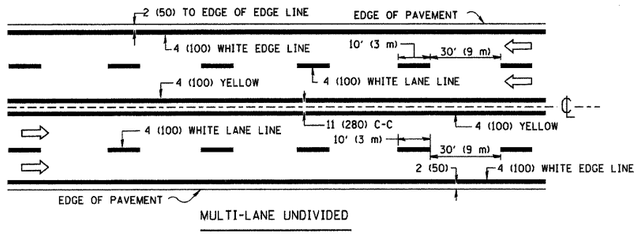
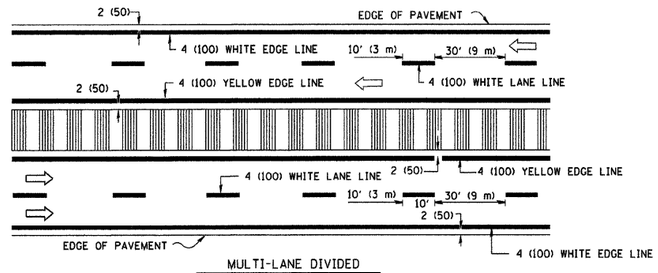
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



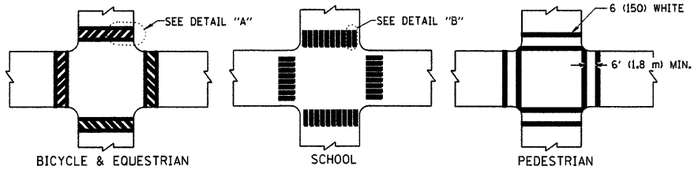
MULTI-LANE UNDIVIDED

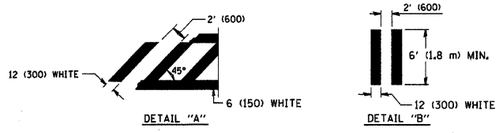


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

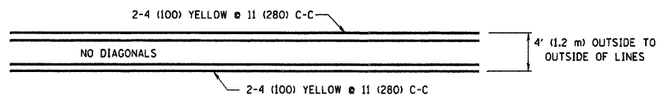
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

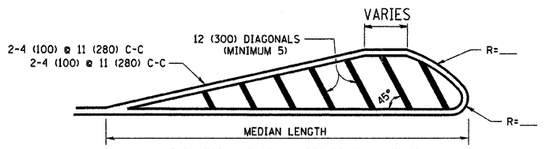




TYPICAL CROSSWALK MARKING



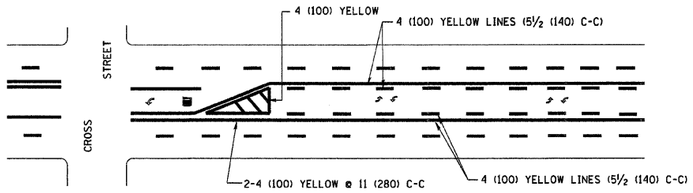
4' (1.2 m) WIDE MEDIANS ONLY



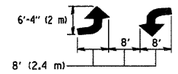
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

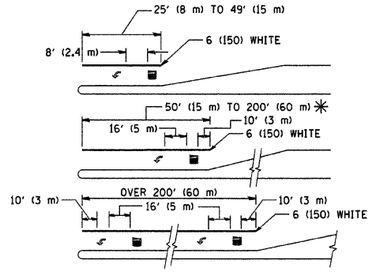


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

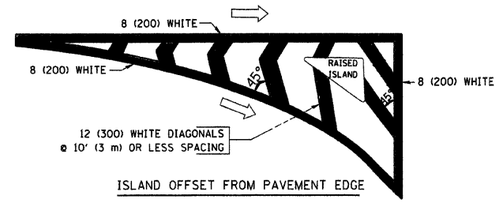


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

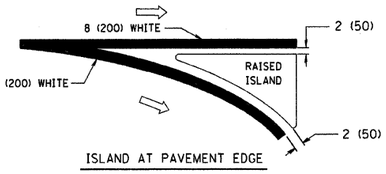
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT	2 ⌀ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ⌀ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ⌀ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ⌀ 6 (150) 12 (300) ⌀ 45° 12 (300) ⌀ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 ⌀ 4 (100) WITH 12 (300) DIAGONALS ⌀ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ⌀ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) ⌀ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

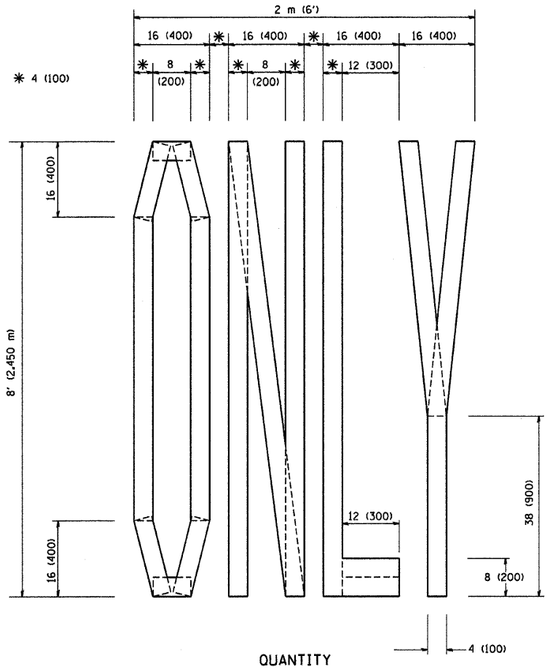
CHECKED BY

TC-13

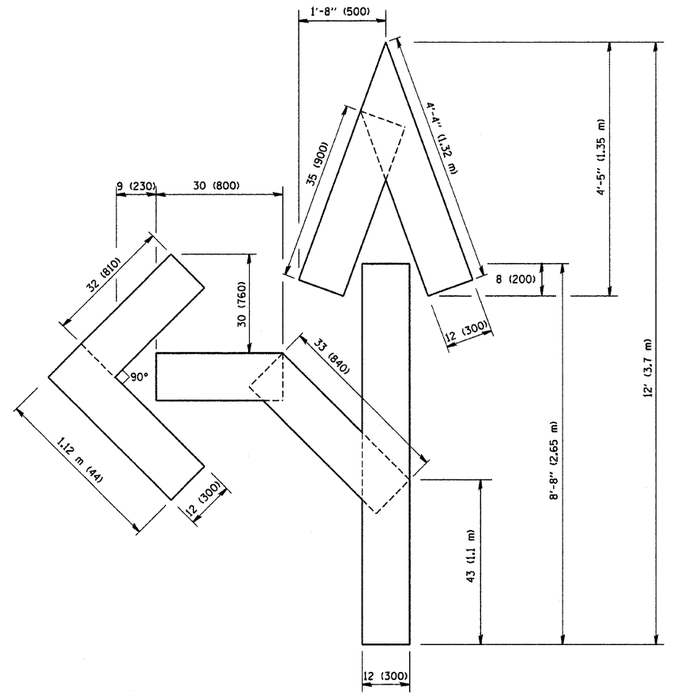
PLOT DATE = 3/6/2007
FILE NAME = c:\projects\tc13.dgn
PLOT SCALE = 50.0000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60B98

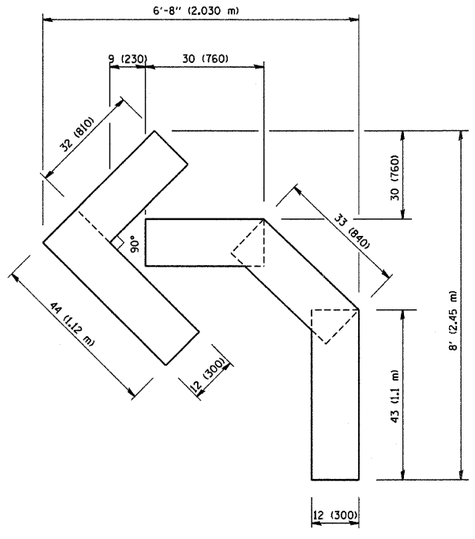
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	76
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



QUANTITY
4 (100) LINE = 64.1 ft. (19.7 m)
21.1 sq. ft. (1.97 sq. m)



QUANTITY
4 (100) LINE = 82.5 ft. (25.3 m)
27.5 sq. ft. (2.53 sq. m)



QUANTITY
4 (100) LINE = 45.5 ft. (13.9 m)
15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE

DRAWN BY CADD

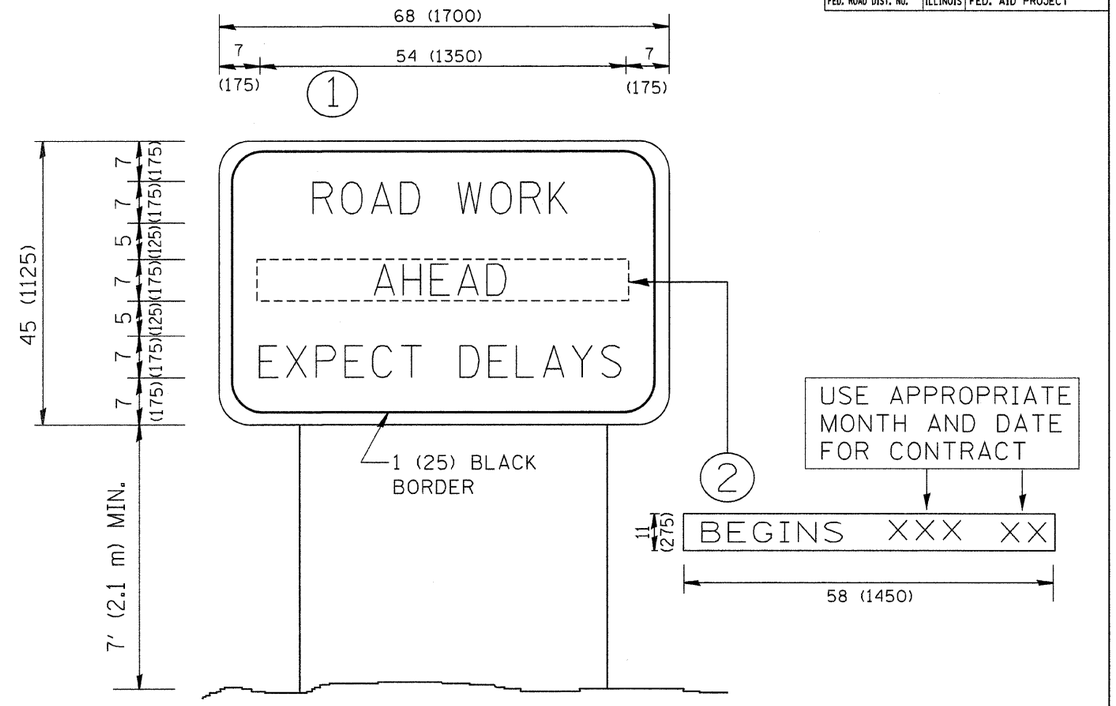
CHECKED BY

TC-16

PLOT DATE = 3/7/2007
FILE NAME = k:\dist\civil\tc16.dgn
PLOT SCALE = 64.0000 '/ IN.
USER NAME = bauerdl

CONTRACT NO. 60B98

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	77
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE

DRAWN BY DESIGN

CHECKED BY

TC22

PLOT DATE = 3/6/2007
FILE NAME = k:\data\tc\tc22.dgn
PLOT SCALE = 50.000 '/ IN.
USER NAME = bauerdl

PLOT DATE = 10/17/2007
FILE NAME = W:\Emerson Street\Proposed Plans\Plan&Profile\Emerson.dgn
PLOT SCALE = $SCALE$
USER NAME = $USER$

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

EMERSON STREET

605

600

599.47'

100+00.00

(McCORMICK BLVD.)

EMERSON STREET

EXIST. R.O.W.

EXIST. R.O.W.

605

600

599.37'

99+00.00

EMERSON STREET

EXIST. R.O.W.

EXIST. R.O.W.

605

600

599.41'

98+00.00

EMERSON STREET

EXIST. R.O.W.

EXIST. R.O.W.

605

600

599.84'

97+00.00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90

F.A.U.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	78

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

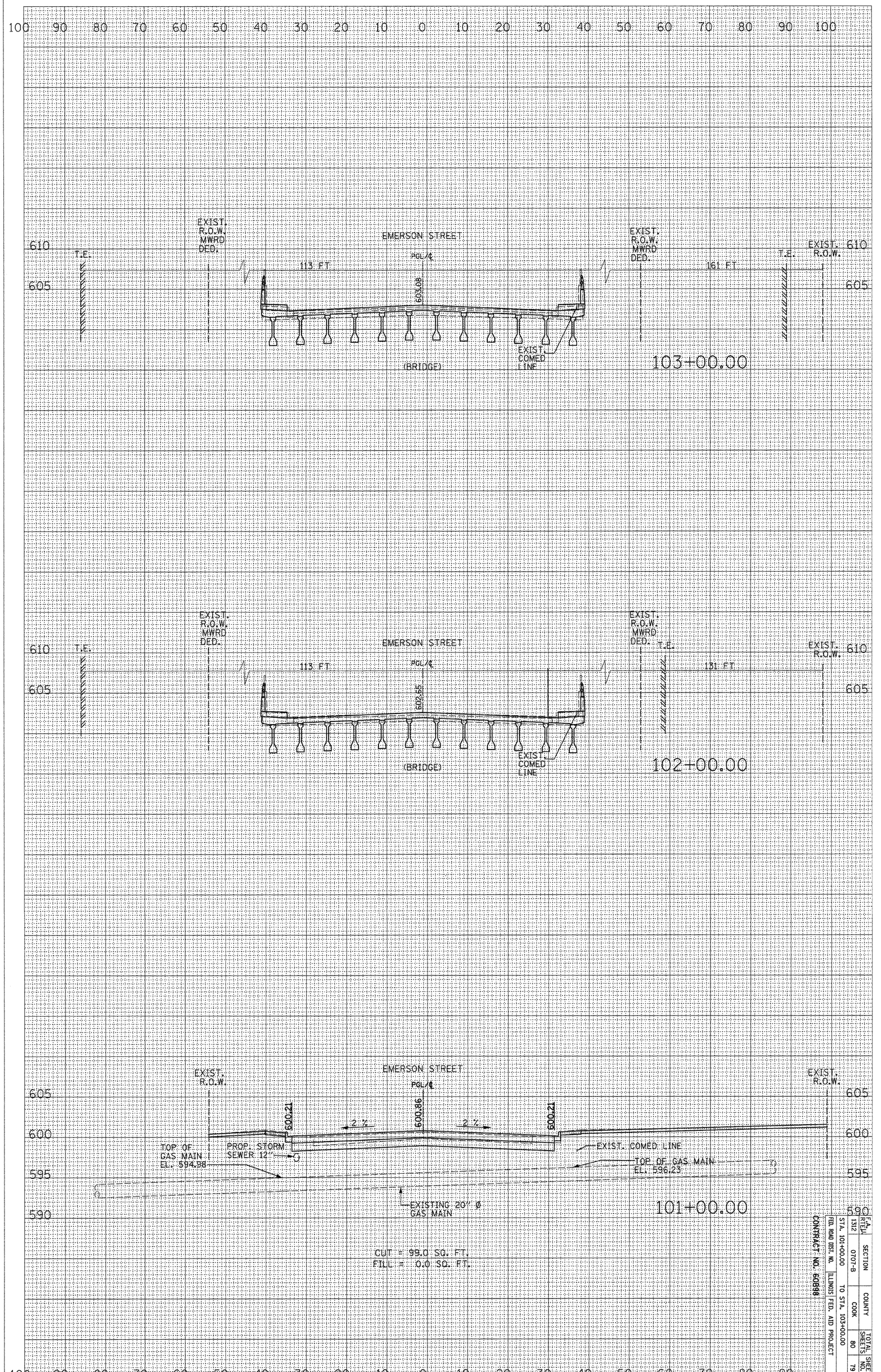
STA. 97+00.00 TO STA. 100+00.00

CONTRACT NO. 60838

PLOT DATE = 10/17/2007
FILE NAME = W:\Emerson Street\Proposed Plans\Plan Sheets\Emerson Str
PLOT SCALE = @SCALE@
USER NAME = @USER@

ORIGINAL SURVEY		BY	DATE
NO.	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



CUT = 99.0 SQ. FT.
FILL = 0.0 SQ. FT.

FED. ROAD DIST. NO.	STATE	SECTION
13IZ	ILLINOIS	0707-B

COUNTY	TOTAL SHEETS	SHEET NO.
COOK	80	79

CONTRACT NO. 60898

FED. AID PROJECT

STA. 101+00.00 TO STA. 103+00.00

PLOT DATE = 10/17/2007
FILE NAME = W:\Emerson Street\Proposed Plans\Cross Sections.dgn
PLOT SCALE = #SCALE#
USER NAME = #USER#

ORIGINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

FINAL SURVEY		BY	DATE
NOTE BOOK	SURVEYED		
	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

EAST X-SEC 1

CUT = 71.7 SQ. FT.
FILL = 24.7 SQ. FT.

SEE GRADING PLAN SHEET 18 FOR THE LOCATION OF THE EAST CROSS-SECTION

WEST X-SEC 1

CUT = 107.5 SQ. FT.
FILL = 4.0 SQ. FT.

SEE GRADING PLAN SHEET 18 FOR THE LOCATION OF THE WEST CROSS-SECTION

EMERSON STREET

598.75

106+00.00

EMERSON STREET

EXIST. R.O.W. MWRD DED.
T.E.
113 FT
600.07
600.09
600.01
2 %
2 %
PGL/℄
EXIST. R.O.W.
117 FT
EXIST. COMED LINE

CUT = 108.2 SQ. FT.
FILL = 0.0 SQ. FT.

105+00.00

EMERSON STREET

EXIST. R.O.W. MWRD DED.
T.E.
113 FT
600.18
600.13
600.15
2 %
2 %
PGL/℄
EXIST. R.O.W. MWRD DED.
T.E.
135 FT
EXIST. R.O.W.
EXIST. COMED LINE

CUT = 187.0 SQ. FT.
FILL = 73.0 SQ. FT.

104+40.00

F.A.U.H. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1312	0707-B	COOK	80	80

STA. 104+00.00 TO STA. 105+00.00
ILLINOIS FED. AID PROJECT
FED. ROAD DIST. NO.
CONTRACT NO.: 60898